FAA AviationNews

AVIATION SAFETY FROM COVER TO COVER

SEPTEMBER/OCTOBER 2007

Balloon Fiesta® 2007

U.S. Department
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BACK COVER: Mass ascension at Balloon Fiesta® 2006. (Mario Toscano photo).

At Ease in the ADIZ:

Flying in the Washington DC Metropolitan Area

by Susan Parson

Security-related procedures and requirements are a fact of life for today's pilots, especially those who operate in the Washington, DC metropolitan area Air Defense Identification Zone (DC ADIZ) and the DC metropolitan Flight Restricted Zone (DC FRZ). In the continuing effort to balance security requirements with the needs of the flying public, however, the FAA coordinated with the Departments of Defense and Homeland Security to make changes that will significantly reduce the "footprint" of the DC ADIZ and DC FRZ.

Effective 0500Z August 30, 2007, the DC ADIZ is defined as a 30 nautical mile ring centered on the DCA VOR/DME. It begins at the surface and extends up to, but does not include, FL 180. The new DC ADIZ, designed to be safer and easier for pilots to navigate, is a circular 30-nautical-mile-radius restricted area which eliminates the "mouse ears" shape of the former DC ADIZ. Because it is centered on the DCA VOR/DME, it allows pilots to use a single navigational aid instead of the four in use today. It also frees 33 airports and helipads in approximately 1,800 square miles of airspace, significantly reducing the economic impact on the general aviation community. These changes address many of the issues identified in the more than 20,000 public comments on the FAA's 2006 proposal to make the DC ADIZ permanent.

This article summarizes the requirements and procedures for operating to, from, through, and within the DC ADIZ and the DC FRZ. These requirements and procedures are described in detail in three separate *Notices to Airmen* (NOTAM): FDC 7/0206 covers the DC ADIZ; FDC 7/0211 covers the DC FRZ; and FDC 7/0204 outlines the speed restrictions applicable to Visual Flight Rules (VFR) flight in the area from 30 nm to 60 nm from the DCA VOR/DME. Remember, though, that the NOTAMs are the only official source for this information. Since changes can occur on very short notice, you must always check NOTAMs with Flight Service or DUAT/DUATS before every flight. You can also find NOTAM information, including graphical temporary flight restriction (TFR) data, on the FAA Web site at: <http://tfr.faa.gov/tfr2/list.html>.

Standard Requirements

For any aircraft operation in the DC ADIZ, standard requirements include the following:

- Two-way radio
- Operating transponder with altitude reporting (Mode C)
- Flight plan appropriate to intended operation (see below)
- Discrete transponder code (with certain exceptions)
  - ✓ Use of 1200 code is never authorized in the DC ADIZ!
- Speed restrictions for VFR
  - ✓ Maximum of 180 KIAS inside the DC ADIZ (within 30 nm of DCA VOR/DME)
  - ✓ Maximum of 230 KIAS from 30 nm to 60 nm from DCA VOR/DME
- Communication with air traffic control (ATC) (with certain exceptions)
- Monitor guard, if able (VHF 121.5; UHF 243.0).

IFR Operations

The DC ADIZ is generally "transparent" to pilots operating under Instrument Flight Rules (IFR), but there are several important points to remember. First, you must meet the standard requirements described above. Second—and very important—is that you must file and activate your IFR flight plan before entering the DC ADIZ. This point is especially important for pilots who are departing IFR from a non-towered airport inside the DC ADIZ. Even if weather conditions permit a VFR departure, remember that you must squawk a discrete transponder code before takeoff.

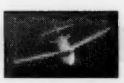
VFR Operations

Special procedures for Leesburg Executive Airport (JYO) entry/exit, "fringe" airport exit, and airport traffic pattern work are described later in this article. For all other operations to, from, through, or within the DC ADIZ, you must comply with the standard requirements listed above, including the DC ADIZ flight plan.

A DC ADIZ flight plan for VFR operations in the DC ADIZ is separate and distinct from a standard VFR flight plan. A DC ADIZ flight plan is filed with Flight Service or on DUAT/DUATS for the sole purpose of complying with the security requirements for VFR operations to, from, or through the DC ADIZ. When filing a DC ADIZ flight plan, VFR pilots should specify the entry or exit "gate" closest to the intended point of DC ADIZ entry or departure. These directional entry/exit gates have been established for pilots to use in (a) filing DC ADIZ flight plans (b) establishing two-way radio communications with ATC, and (c) avoiding congestion over specific points. The gate boundaries are defined by both VOR radials and prominent visual landmarks. Each gate will be associated with at least one dedicated ATC frequency. To use the gates:

Inbound VFR pilots should file the gate closest to the area of intended entry into the DC ADIZ as the "departure" point on the standard flight plan form (Block 5 of FAA Form 7233-1), and file the airport of intended landing as the "destination" point. The pilot may approach the DC ADIZ boundary from any part of the defined gate, call ATC on the frequency associated with that gate; and squawk the assigned discrete code prior to DC ADIZ entry.

Outbound VFR pilots should file the gate closest to the DC ADIZ exit point as the "destination" point on the standard flight plan form (Block 9 of FAA Form 7233-1); call ATC to obtain a discrete transponder code prior to takeoff, continuously squawk that code until well clear of the DC ADIZ; and establish and maintain two-way radio communication with ATC while in the DC ADIZ.



✂ *Cut, fold in center, and save for reference.*

Washington DC ADIZ Special Terms & Procedures

Procedures for Traffic Pattern Work:

Towered Airport: Request pattern work from tower; squawk 1234, remain in two-way communication with tower.

Non-Towered Airport: File DC ADIZ flight plan; obtain and squawk discrete transponder code, communicate pattern position via published CTAF, and have ability to monitor VHF guard on 121.5 or UHF guard on 243.0

ATC Terms Specific to the DC ADIZ:

Security services: Identification, communications and security tracking provided by an ATC facility in support of DOD, or other security elements. *NOTE: Security services do not include basic radar services or any other ATC services.*

Transponder observed: Used in security airspace to inform a pilot that the aircraft's assigned beacon code and position has been observed. This transmission does *not* imply ATC services. It conveys only that the transponder reply has been observed and its position correlated for movement through security airspace.

Remain on the code until you land: Used when Potomac hands an inbound VFR flight off to the tower or authorizes change to advisory frequency for non-towered airports. This term reminds pilots to remain on the assigned discrete transponder code until after landing. *NEVER squawk 1200 inside the DC ADIZ.*

Emergency Procedures:

Transponder failure: An aircraft unable to transmit the ATC-assigned transponder code must contact ATC and comply with all instructions. If unable to contact ATC, the aircraft must exit the DC ADIZ by the most direct lateral route.

Intercepts: Review interception procedures in the AIM. If you are intercepted, follow all instructions given by the intercepting aircraft. Monitor 121.5, provide call sign / position, and squawk 7700 unless otherwise directed.

Potomac TRACON Telephone Numbers

Area Name	Nearest major airport)	Telephone
Shenandoah	Dulles (IAD)	1-866-709-4993 1-540-349-4097
Mount Vernon	Reagan National (DCA) Andrews AFB (ADW)	1-866-599-3874 1-540-349-0493
Chesapeake	Baltimore (BWI)	1-866-429-5882 1-540-349-8478
James River	Richmond (RIC) Charlottesville (CHO)	1-866-640-4124 1-540-349-9697

Washington DC ADIZ Standard Requirements

Requirements to operate to/from, or within the DC ADIZ (effective 0500Z 30 August 2007)

1. Two-way radio
2. Operating transponder with altitude reporting (Mode C)
3. Flight plan appropriate to intended operation:

   IFR: IFR flight plan
   VFR: DC ADIZ flight plan for all operations, *except*:

   - ∞ Fringe airport egress (*no flight plan required*)
   - ∞ Towered airport pattern work (*make request to tower*)

4. Discrete transponder code for all operations, *except*:

   - ∞ Leesburg (JYO) ingress (1227) or egress (1226)
   - ∞ Fringe airport egress (1205)
   - ∞ Towered airport pattern work (1234)

5. VFR speed restriction (≤ 180 KIAS in DC ADIZ, & ≤ 230 KIAS from 30 NM - 60 NM from DCA VOR/DME unless otherwise authorized.)
6. Communication with ATC for all operations, *except*:

   - ∞ Leesburg (JYO) ingress/egress: make CTAF calls
   - ∞ Fringe airport egress: monitor guard if able
   - ∞ Towered airport pattern work: talk to tower
   - ∞ Non-towered airport pattern work:
     - ∞ Make CTAF calls & monitor guard if able

Activating: A DC ADIZ flight plan to enter/exit the DC ADIZ under VFR activates when the pilot obtains a discrete transponder code *except*:

- ∞ Leesburg (JYO) ingress/egress: with CTAF calls
- ∞ Fringe airport egress: when pilot squawks 1205
- ∞ Towered airport pattern: with squawk & talk
- ∞ Non-towered airport pattern: with CTAF calls

Closing: The DC ADIZ flight plan closes when the aircraft exits or lands at an airport inside the DC ADIZ.

Washington DC ADIZ
VFR Outbound Procedures*

Step 1: Preflight—File a DC ADIZ Flight Plan

- *ALWAYS* review NOTAMs for current TFR information.
- File DC ADIZ flight plan.
  "I would like to file a DC ADIZ flight plan for VFR flight from (departure airport) to (appropriate exit gate)"
- If desired, file separate VFR flight plan (search-and-rescue) to be activated after exiting the DC ADIZ.

Step 2: Pre-Takeoff — Activate DC ADIZ Flight Plan

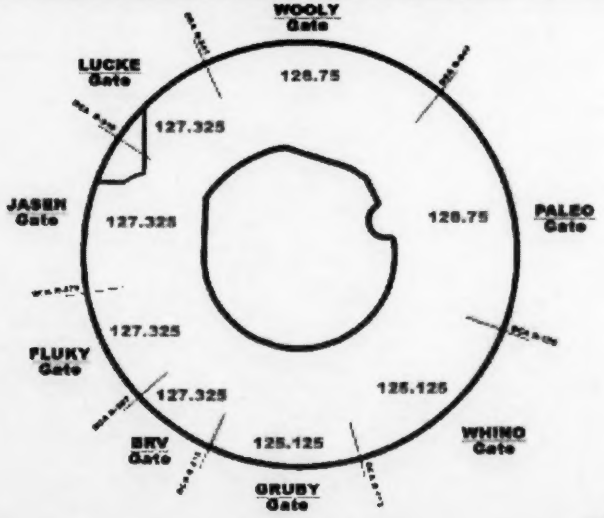
- Call ATC (tower, RCO, phone) for frequency & squawk.
  "Potomac Clearance, (call sign) at Tipton, VFR departure."
- Set assigned frequency & transponder code.
- Verify that Mode C (ALT) is on.

Step 3: After Takeoff—Communicate w/ ATC

- Establish radio contact with Potomac TRACON.
  "Potomac Departure, (call sign), off Tipton"
- Monitor assigned frequency
- Remain out of Class B unless explicitly cleared to enter.

Step 4: Exiting—Close DC ADIZ Flight Plan

- Remain on frequency/squawk until ATC authorizes change; DC ADIZ flight plan closes upon exiting the DC ADIZ.



Washington DC ADIZ
VFR Inbound Procedures*

Step 1: Preflight—File a DC ADIZ Flight Plan

- *ALWAYS* review NOTAMs for current TFR information.
- File DC ADIZ flight.
  "I would like to file a DC ADIZ flight plan for VFR flight from (appropriate entry gate) to (destination airport)."

Step 2: Before Entry - Activate DC ADIZ Flight Plan

- Before entry, call Potomac to request transponder code.
  "Potomac Approach, (call sign), VFR Inbound to Gaithersburg."
- Set assigned code and verify that Mode C (ALT) is on.
- Continue inbound unless otherwise instructed.
- Remain out of Class B unless explicitly cleared to enter.

Step 3: After Entry—Communicate w/ ATC

- Monitor Potomac TRACON.
- Remain out of Class B airspace unless explicitly cleared to enter.

Step 4: Arriving—Close DC ADIZ Flight Plan

- Change to tower / advisory frequency when so instructed .
- Remain on assigned transponder code until you land.
- DC ADIZ flight plan closes upon landing.

Entry/Exit Filing "Gates" for DC ADIZ Flight Plans

Gate	Defining Radials		Visual Checkpoints	
WOOLY	DCA 341	DCA 046	I-270	I-95
PALEO	DCA 047	DCA 120	I-95	Abeam Chesapeake Beach
WHINO	DCA 121	DCA 173	Abeam Chesapeake Beach	Northern boundary Wicomico River
GRUBY	DCA 174	DCA 215	Northern boundary Wicomico River	Western boundary Potomac River / Widewater Beach
BRV	DCA 216	DCA 237	Western boundary Potomac River / Widewater Beach	West side of Lunga Reservoir
FLUKY	DCA 238	DCA 270	West side of Lunga Reservoir	VA Route 29
JASEN	DCA 271	DCA 310	VA Route 29	VA Route 7
LUCKE	DCA 311	DCA 340	VA Route 7	I-270

*See page 1 for JYO ingress/egress & fringe airport egress procedures.
For detailed information, see online DC ADIZ course at www.faasafety.gov

Transiting VFR pilots must comply with all requirements previously described for VFR operations inside the DC ADIZ. In the DC ADIZ flight plan, list the gate appropriate to the intended point of DC ADIZ entry as the "departure" point, and the gate appropriate to the intended point of DC ADIZ exit as the "destination" point. Transiting VFR pilots must remain clear of the DC FRZ, unless they comply with requirements for DC FRZ entry, and remain clear of the Class B airspace, unless they request and receive an explicit Class B clearance.

As explained in the NOTAMs, the DC ADIZ flight plan does not provide search and rescue, ATC basic radar services, or flight following. Workload permitting, ATC will provide these services to VFR pilots inside the DC ADIZ upon request. VFR pilots who want the search and rescue protections of a standard VFR flight plan must separately file a VFR flight plan with Flight Service or via DUAT/DUATS and activate it by calling Flight Service after takeoff.

Special Procedures for Leesburg and Fringe Airports

Special procedures have been established for pilots landing at, or departing from, the Leesburg Executive Airport (JYO). The NOTAM establishing the DC ADIZ very precisely defines a "JYO maneuvering area" for the purpose of JYO entry/exit, and pilots using these procedures for landing at, or departing from, JYO must remain within its boundaries.

Departing Leesburg Pilots must:

- File a DC ADIZ flight plan, listing /X as the equipment code.
- Squawk 1226 prior to takeoff from Leesburg (JYO).
- Activate the DC ADIZ flight plan by announcing aircraft call sign, aircraft type, and intended departure runway on the published CTAF prior to takeoff.
- Exit the DC ADIZ via the most direct route through the JYO maneuvering area. The DC ADIZ flight plan for departure from JYO is considered closed when the aircraft has exited the DC ADIZ.

Arriving at Leesburg Pilots must:

- File a DC ADIZ flight plan listing /X as the equipment code.
- Squawk 1227 prior to entering the DC ADIZ.
- Activate the DC ADIZ flight plan by announcing aircraft call sign, aircraft type, and intended landing runway on the published CTAF prior to entering the DC ADIZ.
- Enter the DC ADIZ via the most direct route through the JYO maneuvering area. The DC ADIZ flight plan is considered closed when the aircraft has landed at JYO.

Fringe Airport Procedures

Special exit procedures have also been established for pilots departing the DC ADIZ from the following airports:

- Barnes (MD47)
- Flying M Farms (MD77)
- Mountain Road (MD43)
- Robinson (MD14)
- Skyview (51VA)
- Vint Hill Farms Station (04VA)

Pilots departing the DC ADIZ from one of the fringe airports listed above must:

- Squawk 1205 prior to takeoff from a fringe airport.
- Exit the DC ADIZ via the most direct route before proceeding on course.
- Monitor Guard on 121.5.

Pilots entering the DC ADIZ to land at one of these airports must comply with the standard DC ADIZ procedures described earlier.

VFR Traffic Pattern Procedures

Towered Airport Pattern Procedures: To conduct VFR traffic pattern operations (not including practice instrument approaches) at a towered airport within the DC ADIZ, pilots must:

- Ask the tower for closed pattern work before takeoff.
- Squawk 1234.
- Remain in two-way communication with the tower.

Non-Towered Airport Pattern Procedures: To conduct VFR traffic pattern operations (not including practice instrument approaches) at a non-towered airport within the DC ADIZ, pilots must:

- File a DC ADIZ flight plan for pattern work.
- Obtain a discrete transponder code from ATC prior to takeoff.
- Continuously squawk that code while operating in the VFR traffic pattern.
- Communicate pattern position via the published CTAF.
- Have the ability to monitor Guard on 121.5.

Pilots conducting traffic pattern operations within the DC ADIZ may not depart the airport traffic pattern or conduct any other flight operations within the DC ADIZ without complying with standard DC ADIZ procedures.

DC Flight Restricted Zone (FRZ)

The Washington DC Flight Restricted Zone (FRZ) is within, and part of, the DC ADIZ, but this area is subject to additional security requirements and procedures. The NOTAM that establishes the DC FRZ precisely defines the dimensions of the DC FRZ. Flight operations under Title 14 Code of Federal Regulations parts 91, 101, 103, 105, 125, 133, and 137 are prohibited in the DC FRZ unless specifically authorized by a waiver. In general, therefore, general aviation pilots operating under VFR should think of the DC FRZ as a "no-fly" area.

Maryland 3

There are three general aviation airports located within the DC FRZ: College Park (CGS), Potomac (VKX), and Washington Executive/Hyde Field

DC ADIZ Flight Plan – JYO
Ingress/Egress Filing Instructions

U.S. DEPARTMENT OF TRANSPORTATION — FEDERAL AVIATION ADMINISTRATION

FLIGHT PLAN

(FAA USE ONLY) ☐ PILOT BRIEFING ☐ VNR ☐ STOPOVER

1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE/ SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME PROPOSED (Z)	6. DEPARTURE TIME ACTUAL (Z)	7. CRUISING ALTITUDE
X VFR / IFR / DVFR	N call sign	C182/X	120 KTS	LUCKE	1815		VFR/025

8. ROUTE OF FLIGHT

9. DESTINATION (Name of airport and city)	10. EST. TIME ENROUTE HOURS	MINUTES	11. REMARKS
JYO	0	20	ADIZ DUATS

12. FUEL ON BOARD HOURS	MINUTES	13. ALTERNATE AIRPORT(S)	14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE	15. NUMBER ABOARD
5	30		PYLOT, Paula xxx-xxx-xxxx KHEF	2

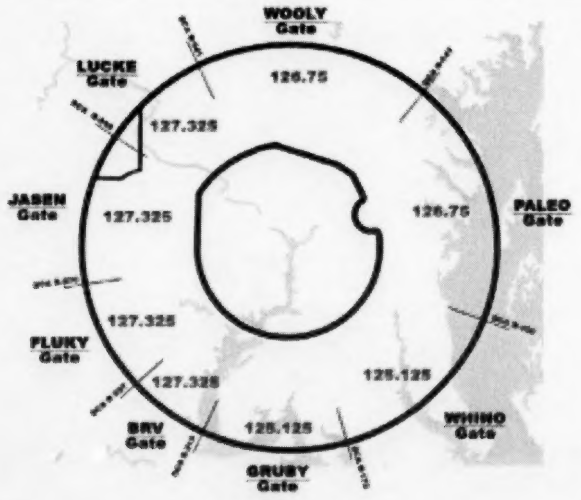
17. DESTINATION CONTACT/TELEPHONE (OPTIONAL): n/a

16. COLOR OF AIRCRAFT: b/w

CIVIL AIRCRAFT PILOTS, FAR Part 91 requires you file an IFR flight plan to operate under instrument flight rules in controlled airspace. Failure to file could result in a civil penalty not to exceed $1,000 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended). Filing of a VFR flight plan is recommended as a good operating practice. See also Part 99 for requirements concerning DVFR flight plans.

FAA Form 7233-1 (8-82) Electronic Version (Acobat)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL



Block 1:	Enter "IFR" for any type of DC ADIZ Flight Plan
Block 2:	**Enter aircraft ID**
Block 3:	Enter aircraft type with equipment code "X"
Block 4:	**Enter TAS**
Block 5:	Inbound to JYO: Enter "gate" appropriate to DC ADIZ entry point
	Outbound from JYO: Enter JYO
Block 6:	**Enter proposed time for DC ADIZ entry or exit**
Block 7:	Enter altitude as VFR/alt (see sample)
Block 8:	**Generally blank for DC ADIZ entry/exit**
Block 9:	Inbound to JYO: Enter JYO
	Outbound from JYO: Enter "gate" appropriate to ADIZ exit point
Block 10:	Enter ETE for DC ADIZ entry or DC ADIZ departure from/to gate.
Block 11:	Enter "ADIZ DUATS" plus additional comments* as appropriate
Block 12:	**Enter fuel on board**
Block 13:	**Generally not applicable for DC ADIZ flight plans**
Block 14:	**Enter pilot's name, telephone, home base**
Block 15:	**Enter number on board**
Block 16:	**Enter aircraft color**
Block 17:	**Generally not applicable for DC ADIZ flight plans**

**Comments for Block 11:

•For all DC ADIZ flight plans:	ADIZ DUATS
•For non-towered pattern work:	ADIZ DUATS + REQ PTTN

Note: DC ADIZ flight plans do not include search & rescue, ATC radar services, or ATC flight following. These services must be explicitly requested and will be provided on a workload permitting basis.

Note: These flight plan filing instructions for use of /X in block 3 apply only to JYO ingress and JYO egress. For JYO pattern work, file appropriate aircraft equipment suffix with aircraft type in Block 3.

(W32). Pilots operating to or from the Maryland 3 are subject to certain additional security procedures established by the Transportation Security Administration (TSA). These procedures include the requirement for pilots to obtain a confidential personal identification number (PIN) to be used for Maryland 3 operations. Procedures for PIN issuance are outlined on TSA's Web site: <http://www.tsa.gov/ what_we_do/ga/editorial_1831.shtm>, and pilots seeking to operate to or from one of these airports should pay close attention to all procedures outlined in the DC FRZ NOTAM (FDC 7/0211).

Lost Transponder or Com

Pilots who become aware of an inability to continuously squawk the ATC assigned transponder code must immediately request instructions from ATC. If unable to contact ATC, the pilot must exit the DC ADIZ by the most direct lateral route.

Online Training

For additional information and guidance material on operating in the DC ADIZ, please take the online training course ("Navigating the New DC ADIZ") located in the Aviation Learning Center at <http://www.faasafety.gov>.

Susan Parson is a special assistant in Flight Standards Service's General Aviation and Commercial Division.

The information presented in this article was current at the time this magazine was published. For the most current information, check NOTAMs at <www.faa.gov>.

Washington DC Air Defense Identification Zone (DC ADIZ) — What Do I Need?

	Type of Operation	Two-way Radio?	Mode C?	Xpdr Code?	Flight Plan?	FPL Type?	Speed	Communication w/ ATC	Services Provided
	IFR	Yes	Yes	ATC-assigned discrete code	Yes	IFR flight plan	n/a	Yes	All ATC Services
VFR	Standard	Yes	Yes	ATC-assigned discrete code	Yes	DC ADIZ	180 KIAS inside DC ADIZ 230 from 30nm to 60 nm from DCA VOR/DME	Yes	Security Services Only
VFR	Pattern Work: All Non-Towered Airports	Yes	Yes	ATC-assigned discrete code	Yes	DC ADIZ	180 KIAS	Announce aircraft type, call sign, position on CTAF If able monitor guard 121.5	Security Services Only
VFR	Pattern Work: All Towered Airports	Yes	Yes	1234 for towered pattern work	No	n/a	180 KIAS	Remain in contact with tower If able monitor guard 121.5	ATC Tower Services and Security Services
VFR	Leesburg (JYO) Ingress/ Egress	Yes	Yes	1226 for egress 1227 for ingress	Yes**	DC ADIZ	180 KIAS	Announce aircraft type, call sign, position, intentions on CTAF	Security Services Only
VFR	Fringe Airport Egress	Yes	Yes	1205 for egress	No	n/a	180 KIAS	If able monitor guard 121.5	Security Services Only

***** For JYO ingress/egress, file equipment code as /X. File appropriate equipment code for JYO pattern work of ADIZ transit***

DC ADIZ Flight Plan -- a flight plan filed for the sole purpose of complying with the security requirements for VFR operation into or out of the DC ADIZ. Each type of DC ADIZ flight plan is separate and distinct from a standard VFR flight plan. There is no search and rescue associated with any kind of DC ADIZ flight plan.

Rev. 08/21/07

Balloon Fiesta® 2007 "Rainbow Skies"

story and photos by Mario Toseano

Albuquerque, New Mexico, the "ballooning capital of the world" holds its 36th International Balloon Fiesta® from October 6 to 14, 2007. Fiesta organizers are anticipating an attendance of about 900,000 guests and 700 hot air and gas balloons from around the world. More than 700 pilots and crews are expected to participate in morning mass ascensions and evening balloon glows.

The 12th America's Challenge Gas Balloon Race—a qualifier for U.S. teams to participate in the Gordon Bennett Coupe, the globe's most prestigious gas balloon race—is scheduled to launch at 6 p.m. on Saturday, October 6.

LAST YEAR'S FIESTA

Balloon Fiesta® 2006 statistics recorded a participation of 700 registered balloons from 41 states and 19 countries. Of these, 94 special shapes balloons and thirteen gas balloons participated in the various events. A total of 810,930 was the final estimate of people going through the gates of the Albuquerque's Balloon Fiesta Park. A total of 812 media representatives from 325 national and international media organizations, including the *FAA Aviation News*, covered the event.

Texas pilot Steve Lombardi was last year's overall hot air balloon competition winner. The U.S. team of Andy Cayton and Kevin Knapp won the 11th America's Challenge Gas Balloon Race flying a distance of 1,479 miles in 60 hours and 21 minutes. Wilhelm Eimers from Germany, and U.S. pilot Greg Winker arrived second with 1,466 miles in 41.46 hours. The U.S. team of Richard Abruzzo and Carol Rymer Davis was third with 1,189 miles in 44.25 hours.

The Education Committee of the Albuquerque Aerostat Ascension Association (Quad-A), as it customarily does before each America's Challenge gas race, held a special safety seminar for all participating teams. FAA's Albuquerque Flight Standards District Office (FSDO), Air Traffic Control (ATC), and Automated Flight Service Station (AFSS) personnel presented pertinent information on charts, Air Traffic Control Centers, communications, weather, and flight services along with several topics related to the safety of the race. The Quad-A Education Committee also hosts a "Balloon Fiesta Safety Seminar" on Tuesdays, during Balloon Fiesta, open to all balloonists wishing to attend. Last year, more than 300 balloonists attended the program that included an in-depth safety presentation from the FAA's Albuquerque FSDO FAA Safety Team (FAASTeam) Program Manager J.D. Huss.

This year's Fiesta Safety Quad-A seminar is scheduled for October 9. The organization's Web site is a "must-visit" for balloonists. In addition to downloadable material—such as prohibited zones (PZ), area maps, schedule of safety seminars, online registration, and the latest information about Fiesta—the Quad-A's Web site, <http://www.hotairballoning.org>, provides valuable links to its visitors.

THE FAA AND FIESTA SAFETY

The FAA community in the Albuquerque area (FSDO, AFSS, Center, and Tower) works closely with the balloon community to make the biggest ballooning event in the world the safest.

The Albuquerque AFSS, now under an FAA contract with Lockheed Martin, operates a remote AFSS in Fiesta Park to provide online and live

services directly to the pilots and crews participating in Balloon Fiesta 2007.

Albuquerque AFSS provides Balloon Fiesta pilots and crews with general information, automated services, frequencies, weather patterns, flight planning, and pilot briefings. Available maps include the New Mexico topography, weather reporting locations, airspace classification, area AFSS and ATC frequencies, Airways-Jet routes, military IR/VR routes, and restricted areas. Pilots can obtain a weather briefing over the phone by calling 1-800-992-7433 (1-800-WX-BRIEF), or (505)243-7831. Lockheed Martin pilot information portal on the Web is at <http:www.afss.com>.

Albuquerque AFSS personnel also staff the America's Challenge Gas Balloon Race Command Center to provide weather and aeronautical information to race contestants and officials as contenders fly across the United States.

Albuquerque's Air Traffic Control Tower (ABQ ATCT) maintains a close relationship with event officials and all the FAA facilities involved with Fiesta for efficient and safe air traffic procedures.

ABQ ATCT representatives are present each day at Balloon Fiesta Park relaying information between the field and the tower, coordinating the closure and release of airspace, identifying aircraft entering restricted airspace, and identifying any possible security issues. The tower and Terminal Radar Approach Control (TRACON) pass along this information as needed to security personnel, keep the flying public clear of the restricted airspace, and work around hundreds of balloons to get aircraft to and from the airport in a safe and efficient manner.

Albuquerque FSDO is also scheduled to have its customary remote facility in the pilots and crew tent at Balloon Fiesta Park.

The FAA has the responsibility to review the certificates and the currency of all participating pilots, as well as each entrant's balloon's airworthiness. Just like airplane pilots, balloon pilots must also meet Federal requirements for certification. Balloons must be inspected for their airworthiness every year or every 100 hours of flight time if flown for hire.

Tamara Bell, an aviation safety inspector with the Albuquerque FSDO, is the FAA's 2007 Fiesta's designated inspector in charge (IIC). In addition to managing the FAA booth from where she ensures that all FAA requirements are met, Tamara deals with all last minute issues to ensure that Fiesta events are safe for participants and all spectators. To help her manage the large workload during Fiesta, the FAA selects and sends several inspectors from neighboring FSDO's to augment the FAA's temporary "office" at Fiesta Park.

RAINBOW SKIES!

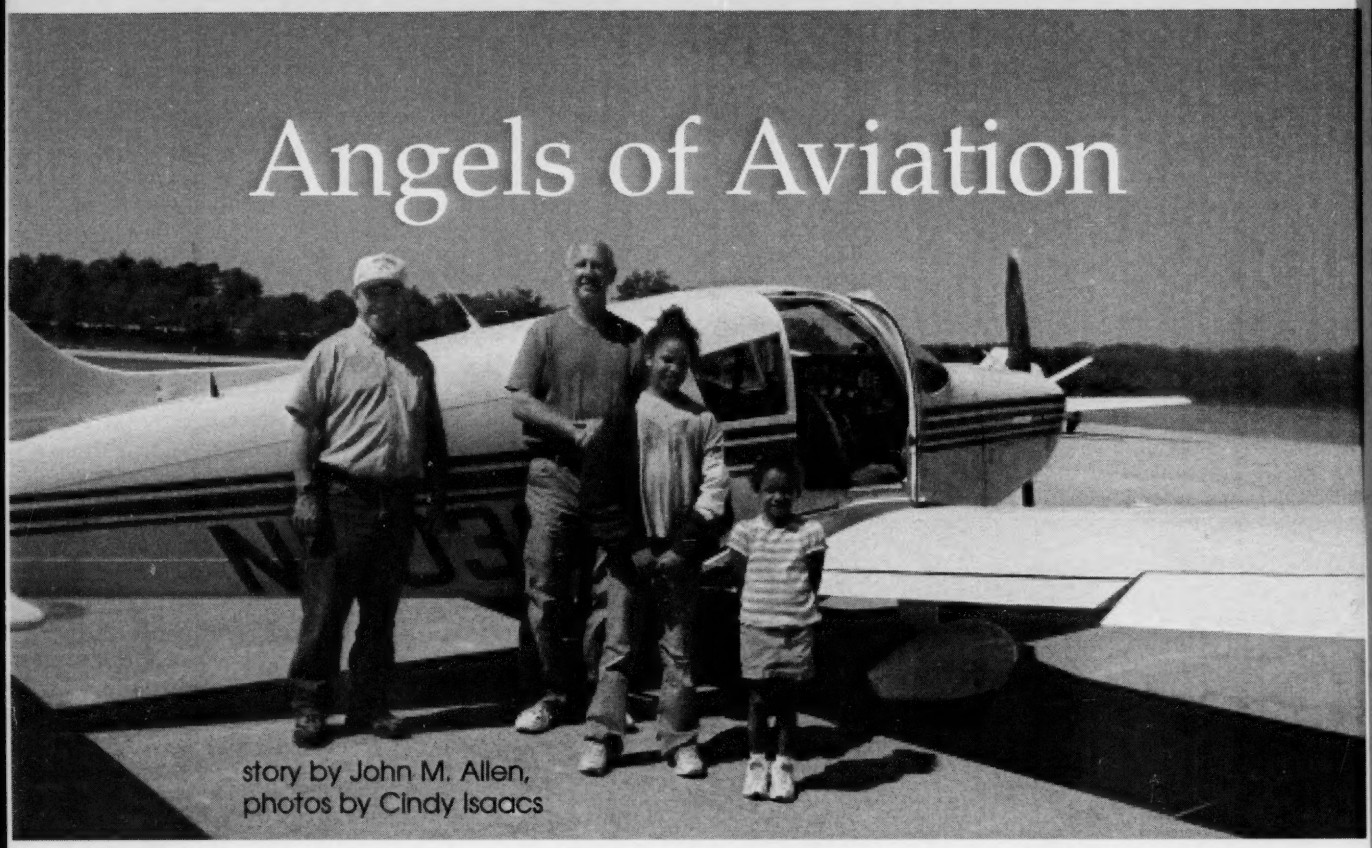
Albuquerque International Balloon Fiesta®, considered the largest and most photographed ballooning event in the world, is an extremely well run organization. Safety in ballooning and operations at Fiesta Park is the primary objective of Fiesta Event Director Pat Brake. She advocates and insist that all her volunteers—more than 2,000 of them each year—have the safety of visitors and participants foremost on their mind.

Historically, the FAA community has succeeded in maintaining the highest safety record through the years at Fiesta because of the genuine collaboration from the event organizers, their leadership, dedication, and responsibility.

If you are a participating pilot or crew in 2007 Fiesta, we renew our invitation for you to drop by the FAA booth in the pilots' tent for an AFSS briefing, to meet the FSDO team, get a free copy of *FAA Aviation News*, or just to say hello. We look forward to seeing you there!

Thanks to the Albuquerque FSDO manager, John Wensel, its personnel, and to Tamara Bell, Balloon Fiesta IIC, for support and help in facilitating our coverage of 2006 Balloon Fiesta, and for this report on the upcoming Balloon Fiesta 2007.

Angels of Aviation



story by John M. Allen,
photos by Cindy Isaacs

We here in Washington get paid to "enable the adventure and commerce of aviation," but there are thousands of unsung heroes out there who humbly and enthusiastically give of their own time and money to make a difference for the future of aviation. I was lucky enough to meet some of these "Angels of Aviation" when I recently had the opportunity to visit, with my brother and parents, our original hometown of Cynthiana, Kentucky.

My parents were born and raised in Cynthiana (pop. 6,000), and I lived there through my elementary school years in the 1960s. Cynthiana is a small farming town about 32 miles northeast of Lexington. While visiting there, I reconnected with a cousin of mine, Bobby Craft (extreme left on photo above), whom I had not seen in over 20 years. Since Bobby is the part-time, volunteer manager of the local community airport, our conversation naturally turned to flying.

The Cynthiana Airport is nestled in a bend of the Licking River, with a 3,800 foot runway and a few hangars bordered by the railroad tracks and the "poor farm." Bobby is justifiably proud of turning this field—once plagued by debt and decay—into a thriving general aviation airport with some of the lowest avgas prices around. After digging out from a devastating flood in 1997—kudos to the Georgetown and Lexington Experimental Aircraft Association (EAA) chapters for helping—Cynthiana Airport is growing, with plans to move the fixed base operator (FBO) building and hangars farther away from the river next to property that was part of the "poor farm."

But what makes Bobby proudest—and what really makes Cynthiana Airport such a vibrant and living place—is his contribution to the future of aviation in America. Bobby's face lit up when I happened to mention Young Eagles, a program run by the EAA in which volunteer pilots in an aircraft they rent or own take kids up for a ride. Over a million kids have experienced the joy of flight through this program. In fact, my sons got their first flights (one in a helicopter, the other in a Cessna 172) through Young Eagles when I was the aviation merit badge counselor of their Boy Scout troop.

As Bobby and I began to share Young Eagles stories, Bobby's wife, Jeana, ran to the car and brought back a CD that showcases the volunteers and kids they introduce to flying via their Young Eagles events. Bobby runs two events a year, one in the spring and another in the fall. These events, advertised in the local paper, draw nearly 200 young people who walk away with a lot more than "just" a first flight. Let me explain.

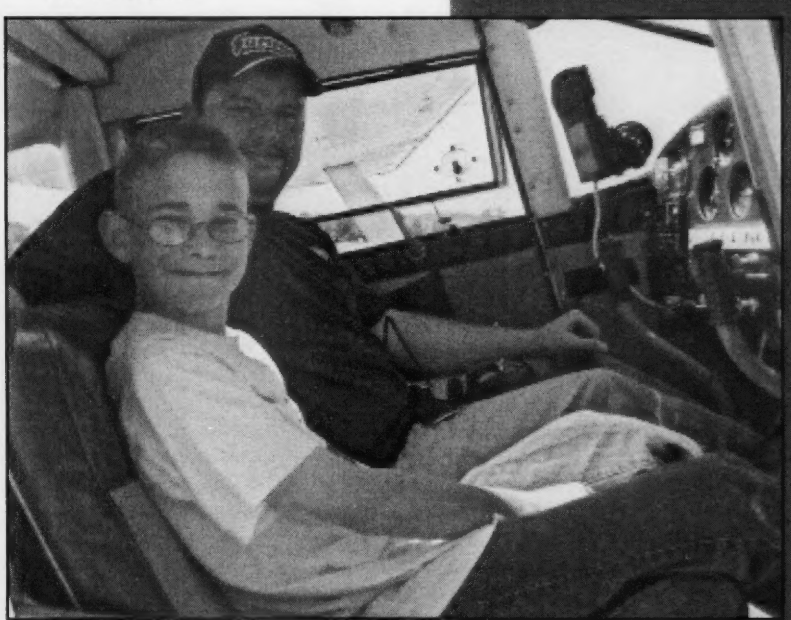
I remember when I was a kid in that same community, bored and dreaming of flying. In those days, there wasn't anyone around to promote interest in or organize activities at the airport. Thanks to Bobby and his dedicated volunteers, that has now changed. Bobby has let it be known that any child interested in flying is guaranteed a flight on any given Saturday—all he or she has to do is show up on any Saturday morning and sit on the bench near the ramp. This promise is a "win" for everyone concerned. Pilots get to fly for a great cause. Kids get a first flight, which provides not only thrill and adventure,

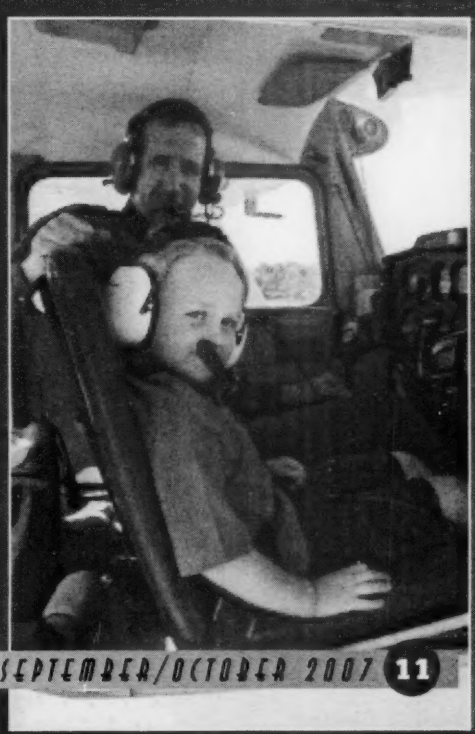
but also a chance to overcome fears, develop pride and self-confidence, and glimpse a whole new world of possibility beyond the cornfields of Kentucky. The airport gets exposure and business—and the community gets a center of healthy, wholesome, and vibrant activity open to people of all ages and backgrounds.

What Bobby and his friends at Cynthiana Airport are doing for this small community is tremendous. We in the FAA and others in the aviation community are concerned about nurturing aviation interest in future generations, but these folks are actively doing what it takes to make it happen. As I stood on the Cynthiana Airport ramp, I couldn't help thinking what a big difference this small airport is making in so many lives and hoping that other pilots in other small communities around this great nation of ours would be inspired by the Cynthiana story.

Three cheers for these "Angels of Aviation" for helping the next generation get a taste of aviation, and see how their futures can soar.

John Allen is Deputy Director of the FAA Flight Standards Service and a Brigadier General in the U.S. Air Force Reserve.





WINTER

story and photos by H. Dean Chamberlain

Just writing the word sends chills down my back. And I live in a moderate temperature zone. The bad thing about writing the word is it means summer is about over. I, like other aircraft owners and pilots, have to start thinking about cold weather operations in the next month or two or when temperatures reach the level where the aircraft flight manual starts discussing oil temperature ratings and other temperature related maintenance items. In some areas, pilots should have already winterized their aircraft or should be in the process of winterizing them.

One of the most important items to consider is deciding if our trusted maintenance experts need to do any required maintenance checks on our aircraft in preparation for cold weather operations. Obviously, the maintenance issues are different between a corporate style jet and a light, piston-powered general aviation aircraft. The same is true of pilot preparations. Airframes and pilots both need winter flight preparation checks. The purpose of this article is to start the thought process while the temperatures are still warm and the maintenance scheduling is still easy.

AIRFRAME CHECKS

In many respects this may be the easier of the two to prepare for winter operations. The best place for any owner to start is with the aircraft's operating manual or pilot operating handbook (POH). I will use POH when referring to both types of documents. For example, the POH or aircraft maintenance manual should list:

- type and weight of oil to use for specific temperature ranges
- whether or not the controls (cables) should be adjusted for the change in temperatures
- the need for any preheating in very cold conditions and how to do it safely
- how to check the electrical system and service the battery for maximum performance
- the use of anti-icing and deicing equipment
- the use of engine baffles and airflow restrictors

If you plan on operating off snow-covered runways, you should review your aircraft manufacturer's recommended procedures for protecting your control surfaces and landing gear from freezing. If you operate aircraft with retractable gear, are there any special recommendations for possibly delaying retraction until the wheels have had a chance for any snow or slush to be blown off? What about the use of wheel covers on fixed gear aircraft? If you plan on operating on skis this year, are you familiar with the ski information in FAA handbook, FAA-H-8083-23, *Seaplane, Skiplane, and Float/Ski Equipped Helicopter Operations Handbook* published in 2004? The handbook explains everything from types of skis, to installation, safety issues, pre- and postflight information, and even how to keep your skis from freezing in place.

If you fly between cold areas, such as the mountains of Idaho, and the warm desert areas of southern California or Arizona, are there any special maintenance items that require your attention? If you fly from Florida to the ski slopes of Colorado, you have the opposite problem of going from hot to cold conditions. If going

from hot to cold, what do you need to know about your aircraft's tire and strut pressures? If you are landing on snow-covered runways or taxiing on ice-covered ramps, what do you need to remember about braking distances? What effect do snow-covered runways have on your aircraft's takeoff and landing distances?

How does density altitude in changing conditions (hot to cold or cold to hot) effect your aircraft's performance?

If you are involved in an accident and your emergency locator transmitter (ELT) fails to function, how will search and rescue be alerted? You might want to double check your ELT, if has not been inspected recently. Is it a 406 MHz ELT? There is a significant operational difference between a 121.5 MHz ELT and the newer 406 MHz ELT. Do you know the differences? If not, you can go to <www.sarsat.noaa.gov> and follow the links to the ELT section. A 406 MHz personal locator beacon might be a nice backup for you, if you have to land off airport. And, of couse, you can always try to use your cell phone to call for help.

PILOT CHECKS

Have you read your aircraft's POH winter operations guidance? Do you know your aircraft's operating limitations? What are your personal limitations?

Have you reviewed any good winter-weather reference books on winter weather patterns and potential winter-related shifts in expected operating conditions?

Do you need to check with your local certificated flight instructor or, if traveling to a winter destination, a certificated flight instructor from that area about local winter flying procedures?

Have you thought about contingency plans if you encounter freezing rain or ice en route to your intended landing place, and your aircraft is not certificated for such conditions?

If you are instrument rated, are you current and proficient? There is a difference between the two terms. What is your status?

Are you prepared for extended hours of darkness? Are you comfortable flying at night?

Are you willing to take the time in the cold, and possibly in the darkness, to do a proper preflight? Or, do you rush through a cursory preflight to get out of the cold?

Do you have a good flashlight with extra batteries and bulbs? Have you thought about the new, long-life LED flashlights with their lower power consumption? If so, you should remember to check its cold weather operating limitations, if any.

What do you know about flying in white-out conditions?

If you are flying VFR, have you ever thought about how the landscape looks once it is snow covered? Things covered with a coat of snow look different from how they appear on a chart.

Have you thought about survival issues if you have to land off an airport? Have you thought about what might happen if you land at a remote, unattended airport and can't contact someone late at night? One of the basic keys to any survival situation is being prepared to walk home at any time of the year. The old saying about being dressed to walk home applies even more in freezing conditions. More than one accident report has described victims wearing summer shorts and clothing while being stranded in snow-covered mountains on what started out to be joy ride from a warmer, lower valley location.

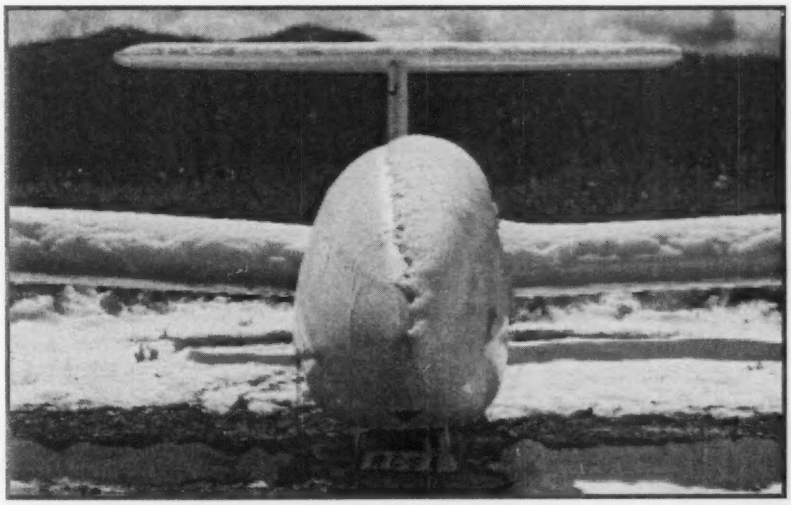
A good survival kit and knowing how to use it can be critical in a life and death situation. Just remember, if you can't reach the survival kit or warm clothing when you need it, it is almost like not having it. Victims have been trapped in their aircraft unable to get to their coats in the baggage compartment. That is why from a safety standpoint, it is a better idea to wear your warm coat and any special winter clothing while flying rather than stowing it and not being able to reach it in case of an emergency.

Remember, in many cases, the shortest route may not be the safest in terms of landing places, access to people, rescue resources, and communications.

Finally, the single most important key to winter operations is to always file a flight plan and if it is a VFR flight plan, you have to remember to activate it upon departure and cancel it upon arrival at the destination.

SUMMARY

As stated, this article is only a reminder of some of the things pilots planning on flying over the winter months in cold weather conditions may want to consider before that first snow flake falls or the temperature starts heading south. Have a safe winter.



Warbirds and Operating Limitations

by H. Dean Chamberlain

Although the technical term for "warbirds" should be "former military aircraft," most of us simply know them as "warbirds." For many of us, our favorite World War II aircraft, be it a North American P-51 *Mustang* or Chance Vought F4U *Corsair* or a North American B-25 *Mitchell* bomber or one of the other types of military aircraft available to the public today, all have one thing in common. That common denominator is the special rules under which they are operated. Because many of these types of aircraft are normally certificated as experimental exhibition aircraft, they operate under different rules than your common mass-produced standard category aircraft.

For example, you can fly your standard category aircraft into just about any big city airport you want, but if you are flying a warbird, you may not because Title 14 Code of Federal Regulations (14 CFR) subpart 91.319, Aircraft having experimental certificates: Operating limitations, says in part in paragraph (c) "Unless otherwise authorized by the Administrator in special operating limitations, no person may operate an aircraft that has an experimental certificate over a densely populated area or in a congested airway." The rule goes on to say in part, the Administrator may issue special operating limitations for an aircraft to conduct takeoffs and landings over a densely populated area or in a congested airway. The question becomes how can you depart that airport in a densely populated area if you can only takeoff and land at that airport. The issue is: What special operating limitations were issued for that specific aircraft?

Like other types of experimental aircraft, the above rule requires each person carried in the aircraft to be notified of its experimental status, the prohibition against operating the aircraft for compensation or hire except under very limited conditions listed in the rule, and other restrictions that apply only to experimental aircraft such as for training purposes.

These are only some of the rules that apply to operating an experimental aircraft compared to a standard category registered aircraft. Subpart H, Airworthiness Certificates, in 14 CFR section 21.171 explains the various airworthiness certificates and how to apply for them.

If you have been to one of the major fly-ins this year and saw your favorite warbird, or to the 44th National Championship Air Races and Air Show in Reno, Nevada, and watched your favorite warbird race, and you have your heart set on buying a warbird, the following are a few of the things you need to review before you make an offer to buy the aircraft. The first question is whether or not the aircraft is a "surplus" military aircraft. (In the rules, surplus military aircraft has a very specific meaning.) Some may not be. Some may be standard certificated aircraft. For example, you can buy a standard category P-51 *Mustang* or a B-25 *Mitchell* bomber. You just have to know your make and model of aircraft. Frankly speaking, a certificated aircraft is a better choice if available. It will not have as restrictive operating limitations.

If you are wondering what an operating limitation is and why do operating limitations matter for experimental aircraft, the answer is simple. An operating limitation, issued by the FAA at the time of aircraft certification, becomes part of the aircraft's airworthiness certificate. If the aircraft is not flown in accordance with its operating limitations, then the aircraft is not airworthy. Not only is this a violation of the regulations, but, in a worst case scenario, if the aircraft is involved in a major accident, the failure to operate the aircraft in compliance with its operating limitation(s) could be justification to void its insurance coverage. In many cases, insurance requirements can be more stringent than FAA regulations and involve a lot more money.

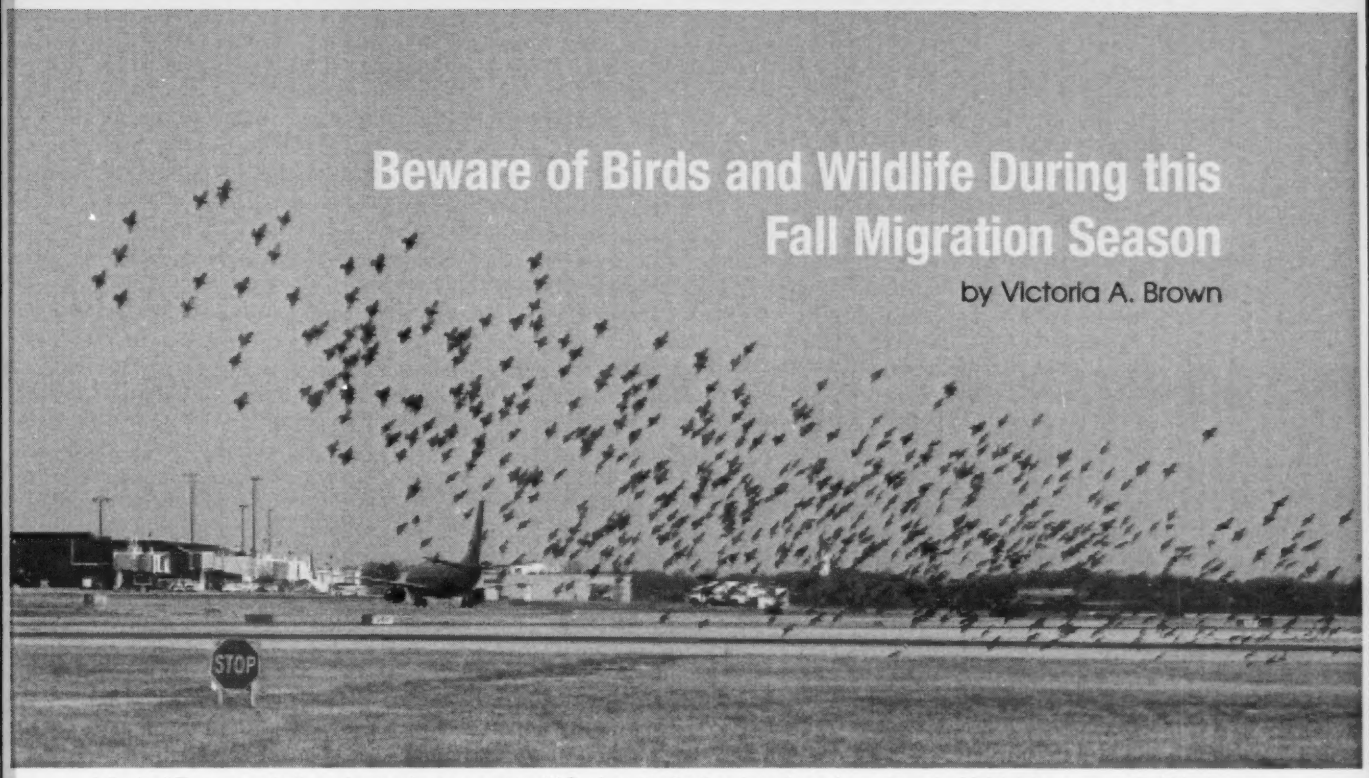
Since operating limitations are issued by individual Flight Standards District Offices, operating limitations for similar type aircraft may be different. The issue is can you operate or live with the operating limitations for the specific aircraft you want to buy? If not, there is a detailed procedure you can follow in the current version of FAA Order 8130.2, *Airworthiness Certification of Aircraft and Related Products*, to surrender your current operating limitations and request new ones. But just remember, the new ones will be issued based upon current requirements and policies and these may be different from the original limitations.

There is also the issue of aircraft registration. Does the current owner have a clear title to the aircraft? There could be bank or mechanic liens against the aircraft on file with the FAA in Oklahoma City. You can visit the Aircraft Registry at the FAA center in Oklahoma City, or you can contract with one of the many services available in Oklahoma City to check the aircraft's records and obtain a certified copy of those records.

Then you need to find an aircraft make and model expert who can inspect the aircraft to see if it is airworthy. This is commonly known as a pre-buy or pre-purchase inspection. The more of an expert the inspector is and the more objective the inspector is, the better it is for you. Simply stated, you want your own expert to inspect the aircraft you want to buy.

After you have completed a records check, had a pre-buy inspection done, worked out the insurance requirements for insuring the aircraft, the most important item you can check is arranging for competent training in the aircraft if you are not current and proficient in make and model. You need to review the regulations dealing with instruction in experimental aircraft to avoid violating the experimental for hire or compensation rules.

If you survive all these steps and finally buy the aircraft of your dreams, we wish you joy with your new aircraft.



Beware of Birds and Wildlife During this Fall Migration Season

by Victoria A. Brown

A flock of European starlings descends at an eastern U.S. airport to feed on insects and weed seeds. Maintaining grass at 6-10 inches may help deter starlings by making it more difficult to forage and to maintain inter-flock communication. (Jeremy Smith, USDA photo)

We have all seen it in the movies—that grand exit of the main character of any typical action flick, the glorious take off of the courageous leading man in a small, but capable, plane. As the plane ascends, it flies right through a flock of birds and our leading man flies side-by-side with our winged friends and eventually soars off into the horizon for a perfect ending. Yes, we have all seen it, but we know life isn't like the movies. As much as Hollywood would like you to believe it, aircraft, no matter how big or small, are not invulnerable to birds. A bird strike can be very dangerous and damaging to the aircraft—not to mention the bird.

Wildlife or bird strikes aren't a new phenomenon. They have occurred since the beginning of flight. The first ever bird strike was recorded by Orville Wright on September 7, 1905. His plane struck a bird (believed to be a red-winged blackbird) over a cornfield near Dayton, Ohio. Although bird strikes are the most common, they are not the only wildlife threat posed to aircraft. Pilots must always be cautious of ground animals like deer, rabbits, bears, and even reptiles, such as alligators or turtles. According to the July 2007 U.S. Department of Agriculture/Federal Aviation Administration report, *Wildlife Strike to Civil Aircraft in the United States 1990-2006*, the state of California has the most bird strikes on record with 6,184 reports since 1990. New York and Texas reported the most mammal strikes on record with 134 and 147 strikes respectively, and Florida reported 46 reptile strikes. Surprisingly, New York came in second with 21 reptile strikes. Figures from the FAA Mitigation Web site show that just in the first five months of 2007 there have been more than 2,200 wildlife strikes reported for civil aircraft in the United States

The majority of wildlife strikes aren't reported. However, since 1990, there have been 83,315 reported wildlife strikes. Of those, 75,731 reports involved civil aircraft and 7,584 reports involved military aircraft at joint use airports. Wildlife strikes cause an estimated $603 million in damages to U.S. civil aircraft annually.

Bird strikes are most frequent during migration seasons in the fall. With the fall migration season approaching, *FAA Aviation News* wants to remind you to be extra vigilant. As always preparation and strategic action can help you mitigate wildlife encounters. Here are some tips to help you avoid run-ins with birds and other wildlife.

For Bird Encounters (no matter what shape, size, or number):

- Keep all external aircraft lights on. Somehow birds are able to sense airplane lights and try to avoid them.
- Unless close to the ground, pull up and gain altitude whenever possible around birds. Normally, birds tend to dive down to avoid the aircraft.
- Allow more then the minimum recommended altitude over bird sanctuaries/refuges/national parks. By having more altitude, the aircraft has a larger buffer zone, which provides more reaction time. The more reaction time the pilot has the better the chance to mitigate or avoid an unplanned encounter. You can find this information along with the locations of sanctuaries at the U.S. Fish and Wildlife Service <www.fws.gov>.
- Whenever possible, wear pro-

tective eyewear. Even a small piece of debris can cause a major problem to your eyes.

For other wildlife (i.e. deer, elk, moose, fox, coyote, rabbits, wild dogs, and bear):

• At airports that have active control towers, you should report any animals spotted in the airport environment. Tower personnel should pass the information to the airport manager's office, which should send someone in a vehicle to chase the animal away.

• At non-towered airports, if wildlife is spotted inside the perimeter, you should contact the fixed based operator (FBO). Someone may be available to chase the animal from airport boundaries. Also, listen to the radio at least 10 nautical miles out. There may be someone ahead of you who has already spotted wildlife. This is also good advice for general situational awareness.

• During night operations, the FBO is still your best source of information. If no one is available, then carefully and safely announce your intentions.

° Before takeoff, taxi down the runway to try and scare any animals around the runway away.

° When landing, make a low fly-by down the runway. This will allow the pilot to see what may be on the runway and, hopefully, scare away any wildlife grazing along side the runway.

Of course, the best advice is to be cautious. During migration seasons for our feathered friends, especially during the fall mating season. For extra help, you can check out the FAA wildlife mitigation Web site <http://wildlife-mitigation.tc. faa.gov/>. This Web site contains data and reports on wildlife strikes that date as far back as 1990. Another Web site that will be very helpful to you is the Avian Hazard Advisory System <http://www.usahas. com/>. This Web site is a risk assessment tool that provides the user with a standardized measure of bird strike risks for low level routes. The United States Bird Avoidance Model <http://www.usahas.com/bam/> is the primary assessment tool for the U.S. Air Force. It is an historical archive for bird strike information.

The *Notices to Airmen* (NOTAM) is good way to see where bird strikes have occurred for that particular day as well as any flight restrictions. These can be found on the FAA Web site <https://pilotweb.nas.faa.gov/distribution/atcscc.htm>. The information is available to help you navigate your way against bird strikes.

Although we can't always have the heroic Hollywood take-off, we can ensure a smooth and safe flight by being mindful and careful of the wildlife that surrounds us.

Thanks to Sandra Wright, manager of the FAA Wildlife Strike Database, for her help and contributions to this article.

Victoria Brown is an FAA summer intern. She is a communications major at Xavier University in Cincinnati, Ohio.

This eagle hit the helicopter's passenger causing several injuries to her chest, face, and fracturing her shoulder. The strike occured at 2,000 ft. AGL over Eden Prairie, MN. Aircraft repairs cost $10,000. (photo by Chris Cooper, Hummingbird Helicopters)

IACRA (Eye ACK' Rah) by Gregory French

Acronyms are the bane of any large organization, and the FAA is no exception. But, just maybe, this one is justified. Try saying "Integrated Airman Certification and/or Rating Application" five times fast. IACRA (eye ACK' rah), on the other hand, rolls off the tongue a bit more easily and, as airmen, we're all going to be saying it a lot more in the future.

What is IACRA? If you've ever applied for a certificate or rating, chances are pretty good that you did it using the good, old, United States Federal Aviation Administration Standard Form 8710. Love it or hate it, it's a pretty familiar document to most of us. While the 8710 has been around in one form or another for many decades, its time has come to rest in peace. That's where IACRA comes in.

IACRA is an Internet-based database program providing a fully electronic method of applying for an airman certificate or rating. If that sounds a bit officious, it is because that's the official definition. In reality, it's simply an Internet-based replacement for the old 8710, and it's a pretty good deal too once you get to know it. Many of you are already familiar with IACRA. Located on the Internet at <http://acra.faa.gov/iacra/>, it's been around in progressively improving form since October of 2003 when it was first released.

The IACRA program has come a long way since its first inception. At the time of its initial roll-out, it could only process the private pilot certificate application (referred to as a certificate/rating "Path"). Today, there are over 100 paths programmed, providing for over 80% of all possible application permutations. And the number of paths is growing weekly as the IACRA program team continues to develop the program's capabilities. Already the program can process virtually all pilot applications from sport pilot through airline transport pilot (ATP) type ratings, certificated flight instructors, mechanics, repairmen, Title 14 Code of Federal Regulations (14 CFR) part 141 flight schools, and 14 CFR part 142 flight training centers. Plus it can handle most repairman applications (remember, repairmen are, by definition, airmen). In the works are some of the more arcane applications, such as part 141 hot-air balloon schools, control tower operators, parachute riggers, and others. Eventually, IACRA will be able to process any airman application that either exists, or might exist, in the future. The current list of active paths can be found on the IACRA Web site under the selection "List of Paths" located about midway down the page.

Before we take a closer look at how IACRA works and how it can work better for you, let's first review the old paper 8710 process to see just what it is that IACRA is replacing and why it has become so necessary. Different certifications and ratings employ slightly different methods by which the paper 8710 applications are processed. In general, the applicant either hand-fills the 8710 paper form or, in more recent years, completes a digital computer-based form, then prints and physically signs it. Depending upon the type of certification or rating, a recommending instructor (RI) may or may not be required to review the paper copy and also sign it. The applicant will then, typically, take that application to a certifying official (CO) who will also review it, administer a test—if appropriate—and then sign it a final time.

Once signed by up to three individuals, the form is either submitted to the local Flight Standards District Of-

fice (FSDO), where it is reviewed and forwarded to the Airman Certification Branch in Oklahoma City, Oklahoma, or it is submitted to Oklahoma directly by the CO via physical mail.

Upon receipt at the Airman Certification Branch, the application is carefully reviewed and, if complete and correct, the data are hand-entered into the airman certification database. If an error is noted in the application, the form is returned to the final signatory for correction and resubmission.

It should be obvious by now that there are several potential difficulties with this method of airman application processing. Many individuals must physically handle a paper product which can result in damaged and/or illegible forms. Forms may potentially be lost in the mail. Errors are frequently made in filling out the application that are not caught until they reach Oklahoma City. Processing times can be lengthy, in extreme cases up to several months. And this is to say nothing of the sheer volume of paper used. The bottom line here is that, in its current state, the 8710 process is complex, time consuming, labor-intensive, and error-prone.

See a problem here? Well, you're not the only one. Around the turn of the millennia the FAA started taking a hard look at how to improve the process. Plus, the FAA had been wrestling with the Paperwork Reduction Act of 1995 for nearly five years already and saw this as a logical opportunity to comply with the requirements of that act—that is to reduce paperwork. In January 2003, development of the IACRA program commenced and the rest, as they say, is history.

Today we have a fully functional program that allows the applicant to apply for an airman certificate and/or rating without ever having to touch a piece of paper, from start to finish. The program is tied directly into the airman databases located at the Civil Aviation Registry in Oklahoma City, which allows for instantaneous data verification during the application process and instantaneously updates the databases upon airman certification. For most applications, it's a triad: the applicant, the recommending instructor, and the certifying officer (most often a Designated Pilot Examiner, although others may play that role, such as an FAA Aviation Safety Inspector). All three parties must have access to the Internet and to the IACRA Web site.

Let's take a look at a typical process. We'll use an initial private pilot application as an example. Let's say you, the reader, are the applicant. The first thing that you will do is go on line at <http://acra.faa.gov/iacra/> where you will register with the IACRA site. This will require the standard name, address, student pilot certificate number (if you have one already), and some other basic information. When you finish the basic registration process, you will be assigned an FAA Tracking Number (FTN) that you will keep forever. Keep the FTN secure, but keep it available. You'll need it throughout your flying career. Keep in mind that, even if you're not currently going for a new certificate or rating, you can get yourself registered on IACRA at any time. Just remember to hang on to that FTN once you get it. You can get the IACRA Help Desk folks to re-issue it to you, if you lose it, but you'll have to jump through some hoops. The good folks at the Help Desk are very concerned about your online security.

After you've registered, you can then log in as a user with your FTN and begin the process. It would take too long here to explain each step of the application, but you'll find it's really self explanatory once you get there. There will be six tabbed pages of requested information. Much of the initial information for tab-page one will already be auto-filled from the Oklahoma databases when you put in your FTN number. Complete each of the steps as required. When you complete each page of data, the tab for that page will show a green check mark to indicate that you've completed that stage of information. Note that there's a little bit of a trick here: in order for the program to confirm that you've properly completed a page (and give you the green check mark) you'll have to click on the next page tab first. If that first page was not completed, or completed incorrectly, the little check box on the first tab will show a red "X" and you'll have to go back to correct whatever is missing or incorrect. Be aware that sometimes the pattern of expected response changes a bit from page to page, and certain responses may trigger new questions, so be sure to carefully read each line of each page, top to bottom, so that you won't miss an important instruction. Also note that sometimes some data input fields may be at the bottom of the page, below the screen edge and you'll have to scroll down to find them. Just in case of a problem, each page will have context-sensitive help available so you'll never get lost. And if worse comes to absolute worst, you can always call the Help Desk at 1-866-285-4942. Trust me; these guys live to help you with the program, and there's almost never any wait.

Once you've completed the first five tabbed pages of information, you'll be asked on the sixth page to review the application then submit it. That's about it for you as the applicant. With the exception of a signature later on, you're done with IACRA. The rest is up to the RI and CO. If you've pre-prepared by having all of your information laid out before you log in, the total time to input all the required data is less than 10 minutes.

From this point the RI takes over your application. He or she will log onto IACRA as an RI and call up your application based on your FTN. He/she will review the application for correctness and then electronically sign it (E-sign). If need be, the application can be partially reset to correct any errors before final signature. Unfortunately, if the RI has already signed the application, it's too late and you'll have to start over if you need to make any changes. The rationale behind this is that the RI is attesting to the veracity of the information that is on the application at the time that he/she signs it. If any changes were to be made after the signature, then the signature would be invalid. The take-

home lesson here is be SURE that the application is correct before you submit it. Changes made later on can be a pain!

The final step is for you to go take your practical test. Again, using your FTN your examiner will call up your application and review it for accuracy. Once you successfully complete the practical test (and we always assume success) you will be required to log on to E-sign the IACRA form in the presence of the examiner (or appropriate CO). The examiner will then log back in, E-sign the form, and print your temporary certificate on the spot.

It really is that easy. There will be variations on the theme depending on the type of certificate you're applying for, but, for those 100 plus paths already incorporated into the program, the process will be as straightforward as the Private Pilot described above.

Here are a few tips to help you out in your IACRA process.

• Start by downloading and reading the document: Getting Started Desktop Instructions, available as a .pdf file on the IACRA Web site. This small booklet will provide you with some of the basic information you'll need to get started, including definitions, help sources, and tips.

• Next, and this is probably the most important, make sure that you have all of your information in front of you before you log in. This means you have all of your certificates handy, and, if you are applying for a pilot certificate, you've already totaled your flight times for day, night, dual, solo, cross-county, and any others that might be appropriate for the certificate or rating that you're applying for.

• The program has a 30 minute inactivity logout. If you don't touch any keys for 30 minutes, it'll log you out. If you run out of time, or realize that you didn't get a piece of information pre-prepared, you can always save the application and log yourself out. You don't have to complete the entire application at one time. You'll be able to go back in and retrieve it later.

• If you happen to be an applicant for the private pilot certificate and you hold a student pilot certificate, then when the question comes up asking you if you currently hold a certificate the answer will be "yes" since your student pilot certificate counts.

• Note that some of the program's reactions to your inputs may take a few moments. Just be patient. For example, when selecting a make and model of airplane, you might click on, for example, CE-172S, and apparently nothing will happen. Just wait a few moments for the program to process your selection and it'll pop up.

• There's been some concern that applicants are prohibited from using U.S. Government computers for their application process. That's true up to a point. No, you cannot use a government computer to fill out your application. However, if you are working with a government certifying officer, a safety inspector for example, and you're in a government office such as a FSDO, then it is acceptable to log on to their government computer to electronically E-sign the document under the ever-watchful eye of the CO.

• Finally, you'll want to be sure to use a high-speed Internet connection. Dial-up will work but it'll really be slow.

For those of you who still feel that IACRA remains somewhat of a mystery, there's hope on the electronic horizon. By the end of summer this year, there will be an online public-accessible training center for IACRA hosted by the FAA Safety Team (FAASTeam) under the <http://faasafety.gov/> Web site (look for a future link on the official IACRA Web site). This training site is currently under development and will host a number of different training aids that will include instruction documentation, PowerPoint™ presentations, and, best of all, a fully interactive practice IACRA program where you can play the role of applicant, designated examiner, recommending instructor, chief/assistant. chief flight instructor and more, even act as an aviation safety inspector. This fully interactive program will allow you to fill out practice applications, review them as an RI, and sign them off as a CO, all to help you get a better feel for the entire process.

The IACRA team continues to aggressively move the program forward, responding to user recommendations, making improvements, enhancing usability, and adding new paths. The FAA's goal is to see 80% or more of all applicants using the program within three years. Considering the speed, comprehensiveness, ease of use, and efficiency of the program, we'll likely see it overshadow the old FAA 8710 form long before that. So, in a world awash with acronyms, get used to another one: IACRA. It spells "doom" to the old 8710.

Gregory French is an Aviation Safety Inspector in Flight Standards Service's General Aviation and Commercial Division in Washington, DC, and the IACRA Business Program Manager.

IACRA should not be confused with the old ACRA (or Airman Certification and/or Rating Application). ACRA was a stand-alone program for electronically generating and printing a temporary airman certificate on official paper. There was no network connection. The program must be installed on the computer to be used. For all practical purposes, the program is dead. Support for the program was officially cut off in August of 2005 and the FAA stopped producing the special watermarked paper for it. While Oklahoma City will still accept an ACRA-generated form, if it's on a left-over piece of official paper, when the (very limited) remaining supply runs out that'll be the final end of ACRA (note that IACRA can be printed on any ordinary printer paper).

Owning Your First Twin

James Williams photo

A new commitment to aviation training and safety

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Your progression in aviation has brought you to the glorious time where you need or want a twin engine aircraft. You decide cabin-class or comfort class and then prepare your mind to convince your pocketbook that it can be both practical and necessary. (Be prepared for a good argument from your pocketbook.)

The fact that you can afford it is actually way down the list you are going to use in making this move up to the "big iron." You are actually going to have to improve tremendously in your flying skills. Making a new commitment to aviation training and safety can help you avoid some of the more common pitfalls you may encounter as you move forward with the acquisition of your first twin.

Aircraft Selection

It may at first appear that we are going too deep in just picking out the aircraft you want and need, but this is the most important part of the transaction. You simply cannot fly safely with faulty aircraft, and you must be certain you are not getting someone else's package of trouble. You must make sure you are getting the aircraft you actually need that will give you the service you require. Anything wrong with this particular model of aircraft is going to rear its ugly cowling sooner or later, either on the ground or in the air. If it's going to break, let it break under someone else's ownership.

You cannot get too much help here from the experts. What looks good to you is very important, the function is important, and the staying power of the airplane itself is really important, especially its resale value. Is it a high maintenance hog? (Some call them hangar lovers or mechanic's dreams.) Get right down to what performance needs you have and then go forward to the looks, not vice versa. Look closely at an airplane that has a lot of hours because it is going to tell you a lot about that model. Logbooks are going to reveal manufacturing flaws that no one is going to mention. All those hours on the airframe mean it has given service, good or bad, to many people over a long period of time. Get someone knowledgeable to interpret the logs so that nothing is overlooked. The airworthiness directives that have popped up over the years, service bulletins, and other manufacturer's recommendations should be noted.

Find some of the pilots who have flown the model you have selected and talk with them. Listen closely to what you hear. Some pilots are never happy, and some should have been driving a bus for these many years, but if you start hearing a recurring story about some major aspect of the machine, make a note. It is something you can discuss with your mechanic, your appraiser, your instructor, and, hopefully, with the builder of the platform.

Cost

I remember a rich person telling me that in order to make money, or at least spend it wisely, before you buy

something, you must think about what it is going to be worth when you sell it. In other words, if you buy it today, could you sell it for more money tomorrow? The answer is "yes" if you once again do your homework.

Aviation blue books give us a starting point but do not actually reflect the lack of availability of certain models. So one rule of thumb is true: In order to get a first class airplane, you are going to have to build it piece by piece or pay the guy who did it for you. If you want to buy it today and feel comfortable flying it home this evening, be prepared to pay the "Piper," so to speak. Generally, when you reach this level of aviation, you are getting some advice from your firm's Certified Public Accountant (CPA) and attorney and generally know the parameters you are limited to based on your own particular criteria. Still we all want a bargain, at least in the price department. Questions you should be asking just so you know where you are in the bargaining chain: How much did it cost new? What does that translate to in today's dollars? Has it gotten older and more expensive? Probably so. Be very suspicious if an airplane has gone down in value or desirability over the years. Remember, we're not making them any more. What are the average maintenance costs? These are readily available from the operator who will be doing your maintenance and service. What time periods are you going to be without your aircraft because of maintenance? You can put a price on this loss of service, also. Is this airplane you have selected ready to go in every way today? If not, how much time and cost are involved? Don't be fooled into thinking, "Twice as much airplane, twice as much trouble. Twice as much pilot and twice as much cost." It's usually a little more than twice.

Experts

Many and varied will they be. I like appraisers. They work from comparable sales and availability, recent sales information, and can usually tell you the good and bad about any aircraft. I would probably be a little leery of appraisers who also sold airplanes. I would be afraid they might be a tad biased toward themselves and their investment and their profit margin. Still, generally I like them.

Mechanics and service departments familiar with your type, model, and make can be a wealth of information to you before and after the sale. Make friends with your service personnel now.

The local instructors who have actually flown in this type aircraft should have a lot to say about it. If they observed any tendencies that made them work a little harder preparing a pilot for the transition, or discovered anything that might possibly be construed as unsafe, it will be duly noted. Pilots who have flown this airplane and ones just like it can pass on some good advice to you and your instructor, too. (Yes, instructors can learn from someone else.)

Past articles from aviation magazines, bulletins from the factory, prior accident reports for this model, and operators that used this model with some success in moving passengers and freight over the years are all a potential source of good information. Here again, get too much information and then get someone more knowledgeable in the field of aviation to weed out the useless and keep the useful.

Personal Skills

You are truly going to have to be a better pilot than you are now! You will need better radio skills. You must also be more observant, have your procedures and techniques up-to-date, and certainly be quicker than you were in your last airplane. Are you mentally qualified to fly as fast as this airplane will go? What skills are you bringing forward from your last ride? What faults do you have that will only be magnified by a more complex and faster aircraft? Are you prepared to make the time for a continuous recurrency training program with a flight instructor who never seems to be completely satisfied with your flying?

The requirements made on pilots who fly airplanes for a living should be your personal basic minimums from this day forward. There is nothing more frightening than flying with a bad pilot who is so far behind the power and knowledge curve that they actually think they are doing just fine throughout the entire flight. Really scary! Compare what you are starting to do with this scenario. You have been driving for over 20 years in an automobile and have only had a few tickets and traffic scrapes and tomorrow you are going to drive an 18-wheeler to California. Are you ready? Probably as ready as you are for the changeover to this new airplane, unless you have been doing some planning along with your aircraft shopping. I hope you have because I am that flight instructor who never seems fully satisfied with anyone's flying skills, and I am not going to let you cloud up your ticket or mine just because you want to move up to a twin engine airplane. You must be ready in every way, and I'm quite sure this is the way that you would prefer it, too.

Instructor Selection

Careful selection of an instructor will mean an accumulation of the necessary skills at a much faster rate, and it will also mean that you will actually learn something instead of just flying around and around. Remember that some instructors only had to do an engine out approach in a 1954 *Apache* to be certified as a teacher in multi-engine. I am sure that you want and need more experience than this. The other side of the coin is the pilot/instructor who has all those hours in big, big iron, but has never actually been an instructor or flown anything as small as you are buying. This guy is just as dangerous to your training program, if not more so, than the inexperienced instructor. Choose carefully. Ask the dealer you are working with to recommend someone. Ask the appraiser or ask the insurance company for a name. You can bet they have one they can readily recom-

mend and have used successfully before. Ask at the local base operator where you will be hangared and see if they know someone who flies this model you have chosen.

Spend as much time selecting an instructor as you did in your selection of this bird and your future will be much happier. What you are looking for in your instruction program is the ability to go and return safely whenever you want and wherever you want. You want that pilot comfort zone to come over you that lets you actually feel that you are indeed the pilot in command and that whatever occurs you can handle it. What you really want is an instructor who can get you ahead of the airplane. They are out there and they are willing to do the work. You just have to seek them out. I've actually known big iron owners who sent their instructors to school to learn more about the airplane just so they could pass it on to them. Being an instructor is an art form in itself, but finding one who is current and knowledgeable in every make, model, and type is an impossibility. Still, you should be looking for that one person who is going to make you the pilot of your new airplane. It's imperative that you find them before you start flying by yourself.

Conclusion

Let's do a short review of the information we have covered as you prepare to start flying your first twin engine airplane and talk a little bit about your new and concentrated commitment to aviation training and safety.

We now know that some expertise must be exerted on your part in the selection process because we are aware as pilots that you cannot possibly hope for a safe and smooth flight if the aircraft itself is indeed faulty from the very beginning. Seek competent help and use their advice wisely. Don't let anyone know that the price of the airplane has little importance to you. Make good friends now in your selection stage because they will influence the way you fly for a long time.

We have talked all around the cost and finally decided that the matter of money should be left to the experts, the company CPA or Chief Operating Officer (COO). Remember to talk extensively with all the experts we have mentioned before the sale or you will most assuredly be talking to them after the sale. Appraiser, banker, mechanic, avionics technician, and anyone else we might have missed so that the purchase itself is coming from some experience and not strictly emotion on your part.

You are now keenly aware that your personal skill level plays an integral role in this matter because it makes no sense whatsoever to buy something you cannot control, both on the ground and in the air. You are going to carefully select the instructor who prepares you for this journey and stick with them as long as they are helping you keep up with the ever changing world of aviation, but not a minute longer. We are talking safety here, and friendship cannot stand in the way of safe flying.

Finally, the two greatest words any writer has ever written, in closing, you are taking a step that all pilots look forward to, owning and flying a twin engine airplane. With the advice given in this article and all the other advice you can get, good and bad, I sincerely wish you a most enjoyable flight as you go forward. If I can ever be of any service to you as an instructor, I am as near as your computer. I appreciate the interest and answer all questions. I am truly interested in what you are doing in aviation.

James Williams photo

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James E. (Jim) Trusty, ATP, CFI, IGI, was named the FAA/Aviation Industry National Flight Instructor of the Year for 1997, and the FAA Southern Region Aviation Safety Counselor of the Year in 1995 and 2005. He still works full-time as a Corporate 135 Pilot/"Gold Seal" Flight & Ground Instructor/FAASTeam Representative/national aviation magazine writer. If you have comments, questions, complaints, or compliments, you can contact him at <Lrn2Fly@Bellsouth.Net>.

The Federal Aviation Administration
Wants You!

Attention pilots, mechanics, and avionics technicians: this is your chance to start a career in the exciting field of federal aviation safety. The FAA's Flight Standards Service is currently hiring aviation safety inspectors. We are looking for individuals with strong aviation backgrounds for inspector positions in fields ranging from Maintenance to Operations to Avionics. Both air carrier and general aviation inspectors are needed in all fields. There are positions available through out the nation. This is your opportunity to use your experience to improve the already excellent safety record of civil aviation in the United States. As an aviation safety inspector you would be responsible for overseeing airmen, operators, and others to insure they meet the rigorous safety standards set forth by the FAA.

The FAA is an excepted service agency of the United States Department of Transportation. Starting salaries range from $38,824 to $74,194 (FG 9- FG 12) plus locality pay (Locality pay is a geographical enhancement to your base salary). For more information please visit www.opm.gov.

Benefits include federal retirement and 401K type accounts. Health and other insurances are also available. This is an excellent opportunity for those who want to give something back to the aviation industry.

Qualifications vary depending on discipline. For details please visit http://jobs.faa.gov. Under "All Opportunities" you can search by job series 1825 or title containing "inspector." The FAA is expecting to hire approximately 850 inspectors this fiscal year so start your application today.

Federal Aviation Administration

HOW DO I GET A WAAS LPV APPROACH?

by the WAAS Operations Implementation Team

How does your airport get Wide Area Augmentation System (WAAS) instrument approach procedures? There are more than 950 WAAS LPV (localizer performance with vertical guidance) instrument approach procedures already published, and the Federal Aviation Administration (FAA) plans to publish at least 300 more each year for the next ten years. The FAA currently has more space-based LPV (localizer performance with vertical guidance) and LNAV (lateral navigation)/ VNAV (vertical navigation) vertically guided approaches than the total number of instrument landing systems (ILS). ILS and other ground-based navigational systems are limited resources, WAAS is not.

Airfields are normally compared to each other for new navigational aids based on weather patterns and traffic volume. These factors are part of the cost-benefit analysis used to determine which airports receive priority. Since WAAS doesn't require ground-based equipment, the FAA's intent is to publish WAAS approaches to all qualifying runways where an operational advantage can be gained. The reasons for the WAAS program are numerous, but the immediate payback is improved safety (provided by the vertical guidance) and improved airport access during low ceilings and visibility (provided by the improved GPS signal integrity). One long term objective is the cost avoidance of replacing worn out, ground-based navigational aids.

Before your airport requests an LPV approach, check to see if one already exists or is already in production. Many pilots have been surprised to learn that their airport already has WAAS approaches, since a majority of the WAAS LPV and LNAV/VNAV minima were incorporated in revisions of an existing area navigation or RNAV (GPS) procedure.

If there isn't an RNAV (GPS) approach chart with LPV minima for your airport, don't start the request process yet; there could be some LPV procedures already under development. The FAA's Aviation System Standards Web site, <http://avnweb.jccbi.gov/schedule/production>, has a search tool that can scan by airport, state, area, and even by type of procedure. Be sure to highlight "LPV" and "historical data" to learn what is available and what is in the production line.

If there isn't an LPV approach scheduled, talk with your airport manager(s). Management may already know about plans to develop LPVs to the airport. If the runway(s) qualify, the first step for airport management is to have an appropriate airport survey. An airport might have funded a survey, or received funding through a state aviation program, an airport improvement plan, or had a survey contracted by the FAA. If a survey does not exist, an airport can help speed the procedure development process by funding one. If the airport manager is unaware of any survey activity, the manager can talk to the local FAA airport district office (ADO) to find out the situation or status.

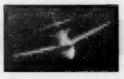
What is the minimum runway criterion for an LPV? The runway must be classified as Instrument Flight Rules (IFR), 3,200 feet long by 60 feet wide or larger, and have paved a surface. An IFR runway requires more than just the appropriate painting and signs. There are clear zones involved which affect the approach minima. The easiest way to know if a runway is classified as IFR is to check to see if an approach already exists. If uncertain, check with the airport manager. A Visual Flight Rules (VFR) runway might be able to be re-classified providing the airport can bring the runway into compliance with IFR requirements. Some airports are VFR because there wasn't a Navigational Aid nearby to provide an approach. GPS and WAAS provide nearly continuous coverage throughout North America which eliminates the lack of navigation signal problem.

Parallel taxiways are recommended to achieve the lowest approach minima. The lack of a parallel taxiway increases the lowest approach minimums the runway will support. Why? A parallel taxiway limits the time an aircraft occupies the runway, and increased visibility is required to determine if another aircraft is back taxiing. In addition, to best benefit the greatest number of pilots, the FAA focuses on airports with higher traffic volume, these airports usually have a parallel taxiway.

Requesting an LPV is the same process as requesting any other type of approach. If your runway qualifies, or could qualify, visit the FAA Web site for procedure development process <http://avn.faa.gov/index.asp?xml=ifp/index> and make your request on line: <http://avn.faa.gov/index.asp?xml=ifp/ifpform>.

As mentioned, having an appropriate airport survey is the key. The process is normally two years from contracting the survey to procedure development, if there are no other limiting factors. Airport managers work through the FAA's local ADO for most of their FAA interaction. Involving the ADO early in the planning stage helps smooth the LPV process. Be aware that any planned airport construction may delay the runway survey and subsequently the LPV procedure. Changing the size and location of a runway end will affect the instrument approach, and the FAA would rather wait and go through the process once, rather than twice.

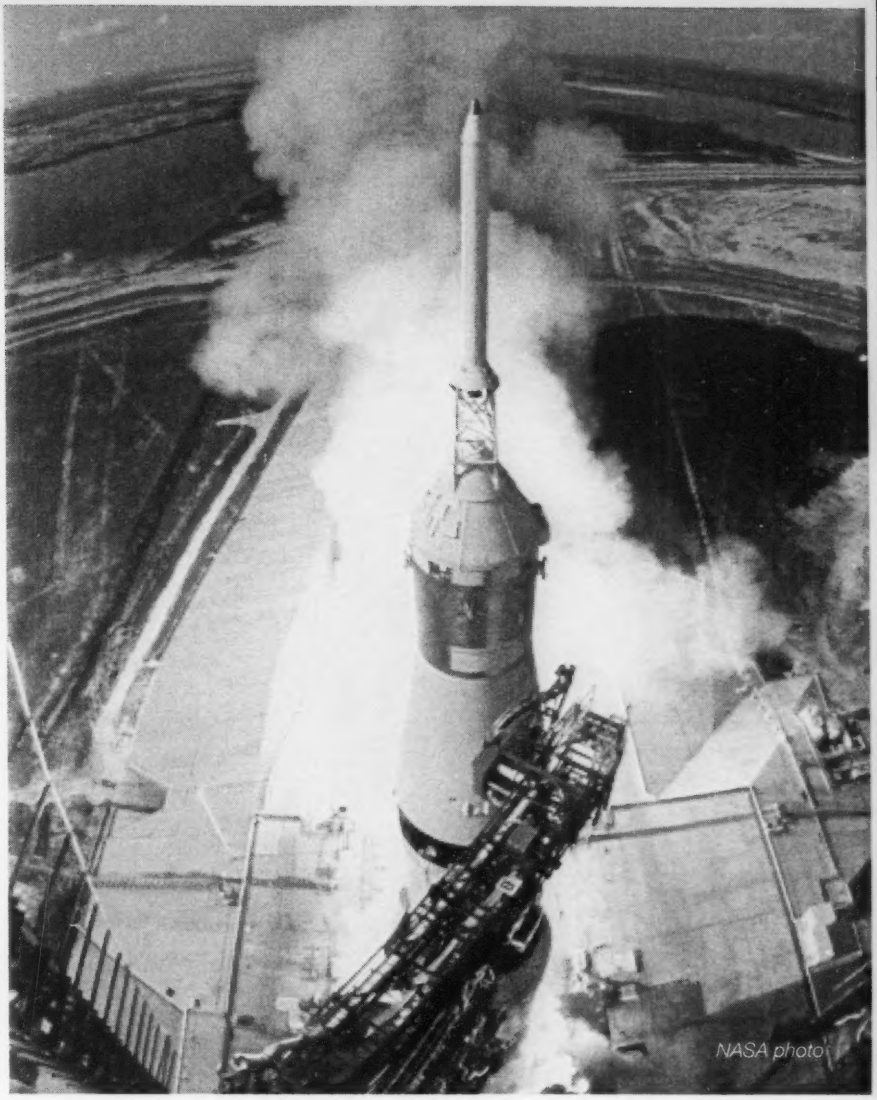
Keep in mind that not all runway



ends will qualify for an LPV, even if they meet the size and qualifications listed earlier. The major problem is high terrain and/or obstacles. Instrument approaches involve more than descents. The missed approach climb gradient must also meet criteria. A common example of a poor LPV candidate is a runway with a localizer-only approach. In most cases, the reason the glideslope wasn't installed was obstacle related. Since LPV uses the same terminal instrument procedure (TERPS) criteria as an ILS, if you can't get one, you won't get the other. The good news is that the airport surveys help identify such obstacles. The surveys will also help determine the controlling obstacles which will determine your decision altitude.

There is an alternative for runway ends that don't qualify for an LPV. There is a new type of approach criteria known as localizer performance (LP). LP minima will give you a WAAS approach (without the glideslope). The LP gives you better signal integrity and availability than an un-augmented GPS (LNAV) approach and may also provide you lower minima. Expect to see the same LP minima on RNAV (GPS) approaches starting in 2009. LP procedures will only exist when an LPV isn't possible due to terrain or other issues. Therefore, the RNAV (GPS) approach chart could have LPV or ALP minima, but not both.

The FAA wants to publish LPVs (or an LP) at all qualifying runway ends where an operational advantage exists. If your airport could qualify, but isn't scheduled for a WAAS approach, work with your airport manager and the airport district office to see what needs to be accomplished. Once you start flying LPV approaches, you may never want to fly a NDB or VOR approach again.

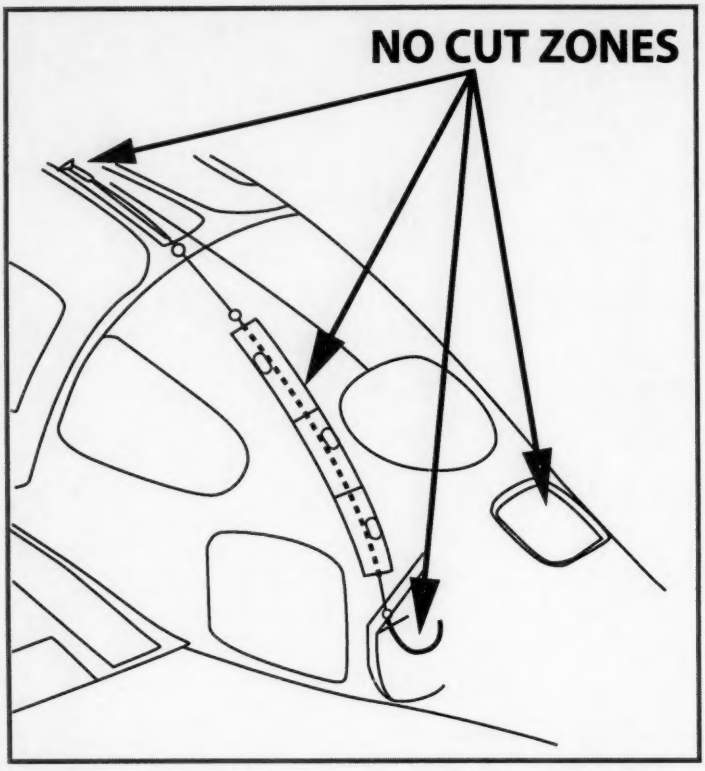

NASA photo

General Aviation and the Moon Landing

by James Williams

What do general aviation (GA) and the moon landing have in common? On an ever increasing basis, it is rockets. That's right rockets—the propulsion mechanism that blast astronauts, satellites, or whatever hardware is needed into space. Of course, I'm not talking about rocket-powered planes, but rather the rockets used to help deploy the airframe parachutes that are becoming standard safety equipment on more and more GA aircraft and ultralights. The benefit of these systems is a topic being explored by other manufacturers, but to date one manufacturer (Ballistic Recovery Systems) claims to have saved more than 200 lives.

As standard equipment on all Cirrus Design aircraft, these systems are now found all over the country. Also many other kinds of aircraft are now



Above: A diagram of the No Cut Zones on Cirrus Design Aircraft. Page 27 Top: A diagram of the areas to stay clear when approaching a Ballistic parachute-equipped aircraft accident. Bottom: A ground extration test of the Cirrus Airframe Parachute System (CAPS). Illustrations courtesy of Cirrus Design, Air Safety Department.

offering airframe parachutes as either original equipment or an after market add on. This means that eventually one of these aircraft may crash somewhere near you. It doesn't even need to be an aircraft equipped with an airframe parachute crashing to involve these rockets. A recent accident in North Carolina proved this.

According to the National Transportation Safety Board (NTSB), on May 26, 2007, a Columbia 400 aircraft was destroyed when it impacted several parked aircraft during an aborted landing. The accident killed all three on board the Columbia. Luckily, no one was on board either of the other aircraft at the time as three of the aircraft involved were destroyed by a post-impact fire. One of the parked aircraft was a Cirrus Design SR-22 and the impact of the Columbia caused the Cirrus to deploy its parachute. Although this accident was widely reported in many different news outlets, the main stream media did not pick up on the rocket firing.

This highlights the point that the existence of these rockets are virtually unknown outside the immediate aviation community and probably unknown to a fair number of those within it. Where that becomes a problem is when emergency response becomes necessary. Emergency personnel for the most part rarely, if ever, deal with aircraft accidents. However, since most general aviation airports do not have dedicated Aircraft Rescue Fire Fighting (ARFF) crews, in the event of an accident local crews will respond. This means that the responding emergency personnel will likely not be familiar with aircraft types and equipment, much less be aware there could be an active rocket on board.

Two other groups that need to be aware of the possibility of rockets are investigators/inspectors and recovery personnel. These groups will usually arrive much later than emergency personnel. But they too need to be aware of unfired rockets. These groups will usually have the benefit of more time to deal with and disarm these rockets than emergency personnel.

It bears repeating that most of these airframe parachute systems use actual rockets, not toy or model-sized ones. These rockets can be about two inches in diameter and 10 inches long in some cases. They can accelerate past 100 miles per hour in less than a tenth of a second. This means that when fired they could injure or even kill someone. These rockets are followed by a 55 pound parachute further adding to the danger of the situation.

Because of the risks posed to emergency personnel and other parties involved in aircraft accidents, airframe parachute system manufacturers have provided guidance to them about identifying and disarming these rocket systems. Identifying these systems is critical because they come in many different varieties and configurations. While they consist of the same four basic components: activation handle, activation cable (sometimes called the activation housing), rocket motor assembly, and parachute container; they can be housed in different places in the airframe and set up in different ways. Locating the system is critical so precautions can be taken.

Ballistic Recovery Systems (BRS) and Cirrus Design provide detailed guidance to emergency personnel about dealing with their systems. This guidance is available to the public from BRS via the Internet at <http://www.brsparachutes.com/ViewDocument.aspx?DocumentID=34> and by calling the Cirrus Design Safety Hotline at 1-800-279-4322. But, as the document stresses, there are many different possible configurations for the equipment so caution is always necessary. Seeking expert assistance is the best course of action. In addition to the 24 hour hotline, Cirrus Design maintains a go-team standing by 24 hours a day to assist investigators or other responders.

Cirrus Design outlines basic safety procedures to follow when dealing

with its aircraft in an advisory DVD the manufacturer produced specifically for first responders. It says that if the parachute is fully deployed then the rocket has been fired and should be harmless. When arriving on the scene of an accident where the parachute has not been deployed, Cirrus advises responders to approach the aircraft from the front or sides to avoid being in the path of the rocket should it fire. Cirrus also shows emergency crews where not to cut the aircraft in order to avoid accidentally setting off the rocket. When attempting to cut into the airframe, if the activation cable is moved more than a quarter of an inch, the rocket could be tripped. While a deliberate pull of the 30 to 40 pounds needed to fire the rocket means that most inadvertent manual actions will not cause an accidental firing, most power tools probably could impart enough force to cause one.

As both Cirrus and BRS point out, one of the most important tasks is to identify whether the aircraft is equipped. While this task is easy with the Cirrus Design aircraft, since all come equipped with the system from the factory, many new designs are adding ballistic parachutes systems as options. Further more, many older designs are now able to add the systems through Supplemental Type Certificates (STC). This means that emergency personnel should consider this threat and take proper precautions until they know otherwise.

The very systems that keep occupants safe can cause danger for those who assist us when the worst happens. This is hardly a new situation that is limited to airplanes. Airbags in cars are a potential threat to rescue workers, as are high voltage batteries and electrical systems like those in hybrid cars. Anytime rockets come into the equation, the level of caution must be raised. Overall these systems provide an invaluable last resort for pilots and are capable of reducing the loss of life suffered by general aviation. It is a testament to the manufacturers involved that, although there has not been a serious injury or death, they are actively promoting awareness and producing training material.

General Aviation Weather Encounters VFR Into IMC

by Walt Echwald

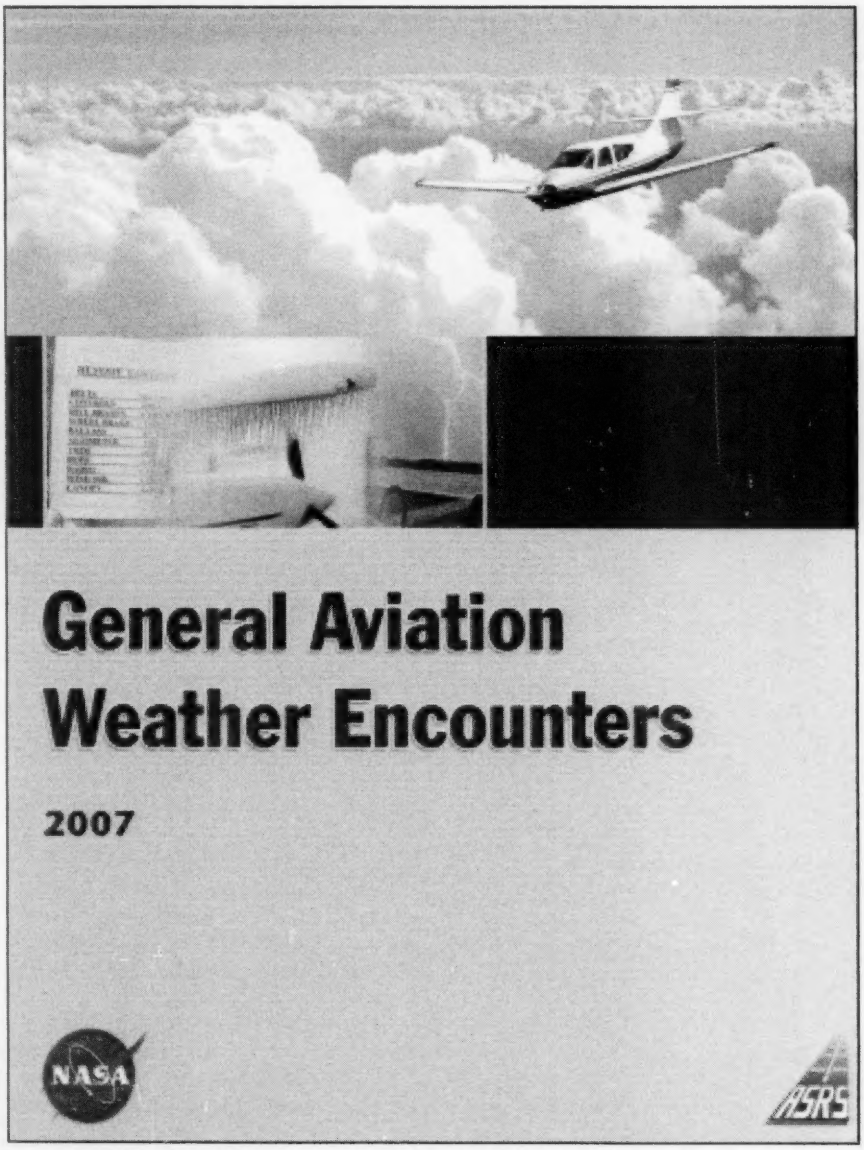
I was asked to review a National Aeronautics and Space Administration (NASA) study of general aviation weather encounters (pilot-reported events rather than accidents). During this process, it became clear to me that the errors being made by today's pilots, who continue visual flight into instrument meteorological conditions (IMC), are not new. I vividly recalled an accident I witnessed in India in 1943, in which an aircrew's weather-related decision making had tragic and fatal consequences.

The story of the India accident is a true example of why pilots need to maintain currency in instrument procedures and be ever mindful of terrain proximity and obstacle heights during encounters with adverse weather.

Our story begins in 1943 during the Indian monsoon season. It was wartime. Two C-47 (DC-3) aircraft were assigned to fly from their home base to the coast of Africa to pickup some newly assigned aircrews.

I was one of the pilots in command (PIC). The first C-47 departed about 10 minutes ahead of mine and our first stop was another base about 50 miles from our home station. There we would pick up our navigators and refuel before proceeding to pick up the new aircrews in Africa.

The weather was heavy rain with poor visibility, if any. The other C-47 PIC and I agreed that we would fly at an altitude of 3,000 feet, inasmuch as there were no obstructions along the route. We were to maintain contact by radio with each other until landing. The static was awful, but we did talk some. Because this was wartime, the enemy may have been jamming our frequencies.



NASA ASRS reports offer a glimpse at the "Why's" of General Aviation weather encounters.

Before departure, the other pilot told me that he intended to home-in on the non-directional beacon (NDB) at the airport and that he planned to

make an approach to land.

As he approached the destination, he called me on the radio and said that he thought the visibility was a little better and that he was going to go down to 500 feet so he could see the airport after he picked up the NDB. He gave me a heading which he said would get me to the airport. A minute or two later I saw a large spiral of smoke coming from the ground and the other aircraft's radio was no longer in operation. He had hit the NDB tower and all on board were killed.

There was a control tower at this airport, but it was of no value to us as they had no weather information, and their radios were out of service. Remember, it was wartime.

In 2004, 61 years after this accident, general aviation (GA) weather-related accidents accounted for one in five fatal accidents. These accidents frequently resulted from pilots continuing VFR flight into instrument meteorological conditions (IMC).

The FAA has long known that aviation incidents ("close calls") mirror many of the same human factors present in accidents, and can offer rich insights not available from other sources of data. With this in mind, early in 2005 the FAA asked the NASA Aviation Safety Reporting System (ASRS) to undertake a research study of GA weather-related incidents reported to the program. These types of events are frequently reported to the ASRS, and the goal of the study was to better understand the event dynamics and factors contributing to weather-related encounters.

The ASRS began identifying incoming reports that qualified for inclusion in the study. To be included in the study, an incident was required to involve a GA aircraft, a weather encounter, and a reporter willing to participate in the study. In addition to event reports solicited for the study, ASRS collaborated with the FAA's Civil Aerospace Medical Institute (CAMI) to develop a written questionnaire that would be answered by study participants.

In July 2005, ASRS analysts began calling reporters and inviting them to participate in the General Aviation Weather Encounter study. Questionnaires were mailed to participating reporters. The ASRS's reputation for protecting reporter confidentiality was the key factor in a strong participation level by reporters. By December 2005, 100 completed questionnaires were received, and ASRS staff began entering the data into a GA weather project database for further tabulation and analysis.

Selected findings from the study, from all types of weather encounters, showed:

- Seventy one percent of study participants possessed an instrument rating.
- Lowering ceilings, clouds or fog, reduced visibility, broken or solid undercasts, rain, and rising cloud tops were the most frequently encountered weather phenomena.
- Eighty percent of involved aircraft were equipped with GPS navigation systems, and seventy percent of the study pilots used GPS during their weather encounter. Most pilots found that GPS provided extremely helpful situational awareness. A few pilots commented that over-reliance on GPS led them to not file flight plans, or may have discouraged them from turning back when they encountered adverse weather conditions.

Walt Echwald holds an ATP certificate and is a former FAA Aviation Safety Counselor.

ASRS GA Weather Encounters VFR Into IMC

by Michael Lenz

I was struck by the two amazingly different outcomes of the two C-47 flights referenced in the previous article. "Continued VFR into IMC" is still the largest cause of weather-related accidents; which are, in turn, the largest cause of aviation fatalities. The fatal accidents occur predominantly during Title 14 Code of Federal Regulations (14 CFR) part 91, general aviation operations. They most likely occur to piston singles and light twins on flights involving distances greater than the typical $100 hamburger run.

What was different between the two C-47 flights and what is different today?

Walt Echwald landed his aircraft safely through a combination of staying above a preset minimum safe altitude and being lucky enough to get a break in the weather. When asked what he would have done if the weather had not improved and perhaps even become worse, Walt responded, "I would have stayed above minimum safe altitudes...it was all we had, and would have waited for better weather or diverted to an area of improving weather. Keep in mind there were no meteorological aviation routine weather reports (METAR's) for Terminal Area Forecasts (TAF) available."

Today, even with sophisticated forecasting tools, we see the same kinds of VFR into IMC accidents. In the general aviation weather encounter survey, there were 44 reports of VFR flight into IMC. (These reports

Dean Chamberlain Photo

were not exclusive of other hazards which may have been encountered, such as thunderstorms or icing.) Nonetheless, VFR flight into IMC presents well-defined risks of colliding with terrain or losing control of the aircraft. The C-47 accident crew descended below the clouds looking for ground contact and their destination. Over 60 years later, the ASRS reports show 33 pilots descending to stay below weather as well.

Strategies for an IMC Encounter: Terrain Avoidance Planning (TAP) and Maintaining Control

TAP is a relatively new concept for VFR pilots. It involves knowing the terrain elevation along the proposed route and selecting a minimum safe altitude for VFR flight should descent below clouds become necessary. Descending below clouds seems to be the action of choice for VFR pilots, according to the ASRS study. We also know from accident data, that it leads to controlled flight into terrain (CFIT) accidents. AOPA Air Safety Foundation has an excellent on-line course on TAP. See <www.asf.org/online_courses/>. Also, see *FAA Aviation News'* November/December 2004 issue for an article on TAP.

Striking terrain, or CFIT accidents, are only half of the story. The other half of pilots involved in VFR into IMC weather accidents lost control of the aircraft.

Either way, the results are almost always fatal. Maintaining control of the aircraft after an inadvertent IMC encounter, at least long enough to turn around, climb to "on-top" conditions or follow ATC vectors to better weather, is something every VFR pilot should be able to do.

"Get There-itis?"

There may be cases in which strong schedule pressures lead to the decision to continue into known adverse conditions. The problem with "Get There-Itis" is that it's easy to use this label and apply it to almost any accident. It offers a nice, neat category in which to toss the accident so we don't have to look further into its root causes. This is especially true of VFR into IMC encounters.

The ASRS reports of VFR into IMC encounters didn't result in accidents, so we get a rare look into the pilot's decision-making. In reviewing the reports, it seems like most were a combination of a failure to make a thorough and timely assessment of weather conditions—this includes getting frequent weather updates while enroute; as well as some type of pressure to complete a trip or task.

A couple of reports that were notable involved remaining in the pattern. We can't put these in the "get there-itis" stack, because they were already "there."

One involved a 16,000 hour, ATP-rated pilot performing night landings for currency in a Cessna 172.

My desire to get night current outweighed my better judgement in the face of deteriorating WX. Although the METAR and TAF obtained through the AFSS prior to flight indicated favorable conditions, the dew on the wings at preflight and temp/dew point spread on the ATIS should have clued me in to the possibility of an earlier appearance of low stratus/fog. With right angle, intersecting runways, I (with tower approval) varied my pattern and runway to turn from the stratus as I realized it would be impossible to maintain the required VFR cloud separation. Although a special VFR clearance (I had current IFR qualifications) would have better ensured my legality as far as cloud separation, the safer option would have been to postpone my effort to another day, rather than aggressive maneuvering using instrument and outside references to maintain visual contact with the airport.

Had the following IMC encounter ended in fatalities, we never would have known of the difficulty the instructor had in wrestling the controls from the student. This event occurred in daylight hours and it's difficult to determine why a 200 foot ceiling did not provide the instructor with stronger visual cues regarding what was about to happen.

I am a CFII at ZZZ1. On AUG/THU/05, I was scheduled with a student and planned to work in the pattern at ZZZ1. WX reported at ZZZ2, approximately 12 miles from ZZZ1, was reported as winds out of the SE, ceilings 1,500 ft, visibility 5 miles. This should have been sufficient for pattern work. We departed ZZZ1 at approximately XA15 and approximately 200 feet above the ground we started going into the clouds. I tried to get control of the aircraft from my student to level off and stay out of the clouds, telling him three times I had the airplane. However, my student, who is significantly larger and stronger than myself, apparently froze on the controls. By the time I wrestled the plane from him, we were deep into solid IMC. At that point I did not want to descend to VMC because I was not sure of our location and was worried about descending into terrain or any of the several towers around the ZZZ1 airport. So I proceeded to climb and contacted ZZZ2 approach to "climb, confess, and comply." I told ZZZ2 approach that I had inadvertently gotten into IFR conditions and needed a contact approach into ZZZ2, but perhaps should have asked for an ASR or radar approach. I was a little distressed at the time, having just wrestled the aircraft from a student and ending up in IMC. Approach asked if I was IFR rated and I told them I was. They gave me the ILS LOC frequency but I was not in position to receive, so I asked for vectors to the airport. In that aircraft the only equipment I had was a VOR with a CDI that would not center. Approach vectored me towards the ZZZ2 airport and eventually the ground reappeared. I asked for a descent and Special VFR back to ZZZ1. They agreed and gave me vectors. We were able to return to ZZZ1 without incident. There are several issues here that caused the problem: the first and most important is the positive exchange of aircraft control was not accomplished in an expeditious manner. My plan in the future is to make sure my students understand when I say I have the aircraft, it means they must let go. Second, I had relied on a WX report that was current, but relative 12 miles away. In the future I will attempt to better assess the immediate local WX before departure.

CALLBACK conversation with reporter revealed the following information: Reporter discussed the incident with her student the next day. He did not realize and had no recollection of what had occurred. Reporter stated the student performs very well, but in this case, froze at the controls. The instructor said when she called approach control to report their situation; she was very excited because for a period of time she was afraid of loss of aircraft control. The boss talked with approach control the next day and the authorities did not feel she had done anything 'wrong.'

One case involved a commercial operator exerting pressure on a pilot to complete a flight. Upon reflecting on the event, pilot offered some worthwhile insight as to how to prevent this next time.

While flying a Cessna 207 at 500 feet MSL between ZZZ1 airport and ZZZ2 airport, I encountered freezing rain 15 miles south of ZZZ2. I started the proper procedure as stated in the Cessna 207 pilot operating handbook for icing encounters. With the first sign that I had encountered freezing rain on the plane I quickly changed course and within seconds was out of the situation. In no way did I ever intend to pick up any kind of ice but events happen and I realized that sharing this info would be worth it. The flight ended without incident and then I started to think of some of the causes that made the situation possible. The biggest factor was pressure by management to take the flight in an airplane that is not capable of IMC and shedding ice. The ZZZ2 WX was reporting 800 broken and 10 miles visibility. ZZZ3 WX was 1,200 broken and 10 miles visibility. ZZZ1 does not have reporting WX. The WX was good enough to attempt the scheduled flight, but it had been turned down by another pilot due to concerns about the WX. I had just returned from another scheduled flight but I was in a Beech 99 that was IFR capable. Management then approached me about taking the flight and used pressures for why I should attempt the flight, these were: 'Passengers are waiting and want to get home,' 'You have just come in from a flight and know what the WX is so you can always turn around,' 'We're disappointed that the other guy won't take the flight,' 'The company can't continue to tell the passenger that we are not flying because of WX while our competition is flying.' My reply to these were, 'That's because they fly Cessna 208 Caravans *and Piper* Navajo's, *both which are fully capable of IMC and shedding*

ice.' These pressures could have been answered with a simple, 'no go.' Every time I fly I learn something new and with this situation it has shown me that management pressures to complete a flight can put pilots in situations that exceed the ability of the airplanes and the pilots who fly them.

For a typical VFR-only pilot, once the decision and commitment are made to use an aircraft for a trip, the pilot wants it to work and wants the trip to go safely. The real go-no/go decision occurs when there are few options and weather, or other challenges present themselves. A VFR only pilot needs to keep his or her options, like other means of transportation, open.

The pilot with a business trip on Monday morning may do a stellar job of keeping an eye on the weather over the weekend—and the forecasts look good. The pilot has to start work at the remote location at 1:00 p.m. on Monday and the trip should only take about 2.5 flight hours. Add the time to pick up the rental car at the airport and a relatively short drive to the job site, it's a great opportunity to use the aircraft for transportation.

When Monday morning rolls around, the pilot sleeps-in, feeling confident that the aircraft is going to save him time and be well worth the extra expense for this travel. The weather throws the pilot a curve, however, because fog has formed at the pilot's departure airport. Now the pilot has few options—the trip's distance makes it too far to drive; it's too late to make airline reservations and then drive to and from the commercial airports on both ends of the trip.

If the weather improves at the airport just enough to depart, the pilot is faced with a tough decision. Should he or she delay to await solid improvement along the entire route and face the certainty of the lost schedule; or depart and chance the unlikely, but very serious consequence, of an aircraft accident.

Ask "What if?" regarding the weather. Do I have options—if so, what are they and can I do any preparation to have them at the ready, if needed. This might be a back-up hotel reservation, arrangements for a rental car, an airline reservation, cell phone contacts for those who are expecting me, cash and credit cards so as to not be pressured to press on if money limits my options.

That was then, this is now!

In the India accident, there were no instrument approach procedures, ATC radar, GPS, AFSS, Direct User Access Terminal (DUAT), commercial weather vendors, AWOS/ASOS, datalink weather directly to the cockpit, internet-based weather and weather radar sites, or cell phones for last minute weather updates prior to departure. If you find yourself about to make a flight with questionable weather, ask yourself which of the above features and services could help you out. I'll bet there are at least a few available to you.

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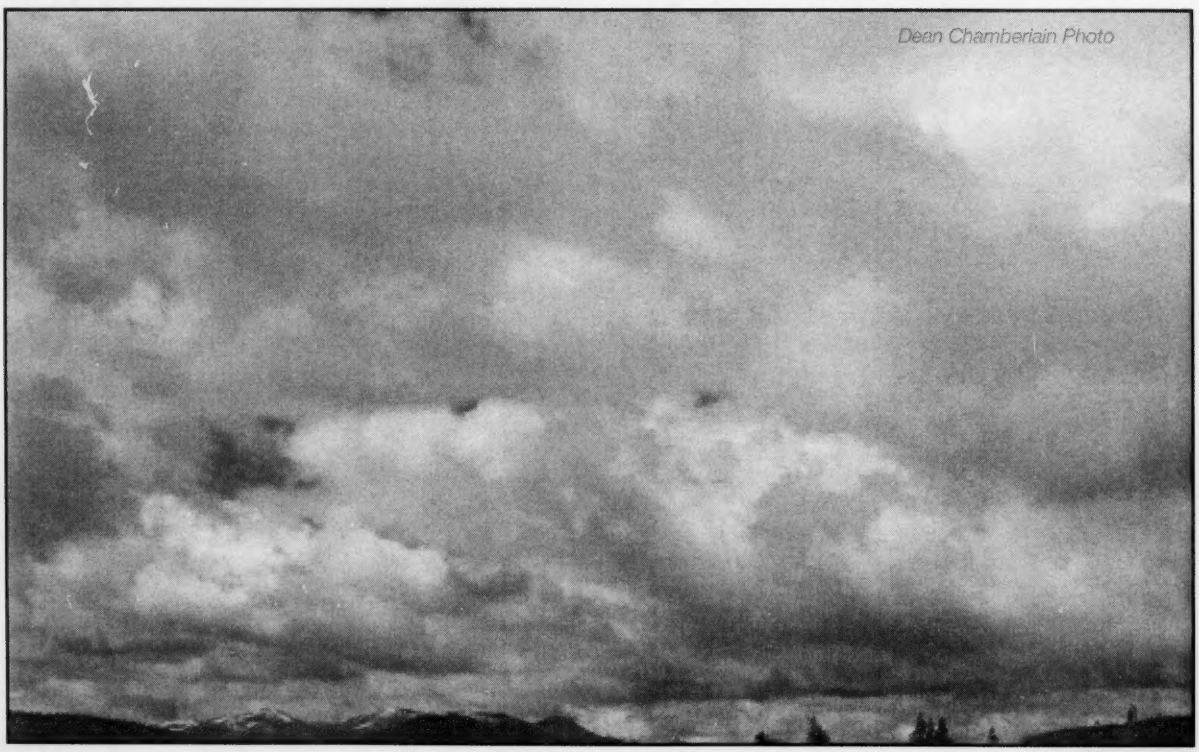
Michael Lenz is a program analyst in Flight Standards Service's General Aviation and Commercial Division.



Dean Chamberlain Photo

Aviation Maintenance Alerts

Aeronca: 7CCM; Stuck Fuel Gauge; ATA 2842

An FAA safety inspector describes the following incident. "This aircraft lost power and landed in a hayfield, *(ending)* up on its nose. The pilot stated he checked the fuel gauge prior to the flight and that it read '1/2.' He did not visually check the quantity. Investigation revealed the fuel tank to be empty and the gauge stuck in the '1/2' position." *(The fuel gauge part number provided: 2-731.)* Part Total Time: unknown.

Beech: A65; Split-Flap Condition; ATA 2752

(The Eastern Caribbean Civil Aviation Authority provided the following report for our FAA Service Difficulty Reporting System data base. One of their pilots wrote this defect's narrative, describing an inbound-flight to the island capitol city of Roseau in Dominica.)

"(This flight...) was under VFR conditions and the approach to landing was normal. After the landing rollout the flaps were retracted. When exiting the aircraft it was noticed that the inner flap on the port side was still down. The flap was manually reset to zero and *(later)* flown back *(to home base and a no-flap landing)*.

"The maintenance department found the L/H inboard flap drive assembly had failed. The two lugs that transfer cable movement 90 degrees into the actuator movement had sheared. The L/H inboard flap could be deployed from the 'up' to the 'down' position, but had to be reset to the 'up' position manually. The L/H outboard, R/H inboard and outboard flap drive assemblies, flap gearbox and motor, and flap drive cables were inspected and found satisfactory. The drive assembly P/N 50-380113-1 was placed on order and the aircraft grounded *(waiting parts)*." Part Total Time: unknown.

Bellanca: 7ECA; Shorting Ammeter Wire; ATA 2497

"While in flight," states a technician, "the pilot reported he could smell something burning—he landed as soon as was practical. Investigation revealed the wire from the alternator to the ammeter (P/N 112) had shorted against the firewall...." "Wires 112, 114, the master relay, starter relay, voltage regulator, and alternator were all replaced." Part Total Time: 1,568.0 hours.

Cessna: 340A; Leaking Fuel Lines; ATA 2820

A repair station technician states, "During aircraft maintenance a strong fuel odor was observed in the cabin of the aircraft. This aircraft *(has been)* idle on the ramp for at least 10 months. The exterior of the aircraft was inspected for obvious fuel leaks—none were detected. By this time the fuel smell in the cabin had cleared up...*(we decided to start the engines)*. During part of this operation the mechanic ran the engines in the fuel cross-feed position—again the strong fuel odor was noticed. The aircraft was returned to the hanger and the floor panels were taken up in the area of the cross-feed lines (where they pass through the cabin area). It was observed a heater duct was running perpendicular to the cross-feed lines and was in contact with *(these)* lines, causing corrosion to form. *(This action)* resulted in pin holes *(developing)* in both lines." *(Fuel line P/N's included are: 5300108-53 and -54. A search of the FAA Service Difficulty Reporting System (SDRS) data base reflects four similar entries.)* Part Total Time: 5,275.4 hours.

• Copyright Policy

Would you please tell me what your copyright policy (if any) is when it comes to copying a publication by the FAA such as the *General Aviation Pilot's Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision Making.*

I know other companies such as Jeppesen reprint flight training books and guides and simply add a new cover indicating its a reprint from the FAA and, of course, they sell the book they have reprinted.

Could you provide with clarification on this question?

Jim Minton
via the Internet

Unless there is notice of copyright, there is no copyright on documents such as the General Aviation Pilot's Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision Making, *but we would, of course, appreciate an acknowledgement of the source. I'm glad you found the document useful, and hope it can help other GA pilots with a practical approach to weather briefings and decision-making.*

FAA AVIATION NEWS welcomes comments. We may edit letters for style and/or length. If we have more than one letter on the same topic, we will select one representative letter to publish. Because of our publishing schedules, responses may not appear for several issues. We do not print anonymous letters, but we do withhold names or send personal replies upon request. Readers are reminded that questions dealing with immediate FAA operational issues should be referred to their local Flight Standards District Office or Air Traffic facility. Send letters to H. Dean Chamberlain, Editor, FAA AVIATION NEWS, AFS-805, 800 Independence Ave., SW, Washington, DC 20591, or FAX them to (202) 267-9463; e-mail address:

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• Joining the FAASTeam

When completing the on-line application to become a FAASTeam Representative, I was very impressed with the features, especially the ability to upload a digital photograph that will eventually be printed on identification badges issued by the FAA. However, most interesting was the line requesting that applicants list their expertise.

When I finished listing my abilities that I felt could benefit the FAASTeam, I went to the FAASTeam Directory to learn about other people in the program. Initially, I felt somewhat foolish, as I had included an extraordinary amount of information compared with others who simply listed "CFI" or "ATP" as their expertise. However, I was reminded that the purpose of the FAASTeam Directory is to exchange information about and among Representatives to maximize the efficiency of the program. For instance, I came across a Representative who included "Web design" under expertise. Since I have a Web site to facilitate my contribution to the FAASTeam, I will definitely seek this person for assistance when appropriate. Had this person omitted his Web-design experience, I never would have known to contact him.

Consequently, I urge Representatives to list all their areas of expertise, however unrelated to aviation they may seem, so that we benefit from the incredible range of experience that exists among our diverse and talented group of volunteers.

The FAASTeam represents an exciting opportunity. Let's make it work together!

Michael H. Connery Jr.
FAASTeam Lead Representative

The goal of the new FAASTeam directory is to allow FAASTeam representatives to maximize their efficiency and effectiveness. With as diverse a group as the FAASTeam, there are likely many people who can work together to improve each other's efforts. The FAASTeam is trying to emphasis the team aspect and create the best possible program. Through collaboration the FAASTeam hopes to reach even farther than the previous safety program and continue to apply downward pressure on the aviation accident rate. As we resolve the most obvious and accessible threats to aviation safety, new methods and approaches must be used to continue to improve aviation safety.

For more information on becoming a FAASTeam Representative, see <www.faasafety.gov>.

• Request a Copy of a SODA

I have a medical Statement of Demonstrated Ability (SODA) for vision. The form has become worn and tattered. How can I get a replacement?

Name withheld by request

You can request a replacement form by sending a letter requesting a copy of your SODA/Waiver with your name, date of birth, Social Security Number, mailing address, and your signature along with a check or money order for $2.00 payable to the FAA to the following address.

FAA, Aerospace Medical Certification Division, AAM-331
ATTN: Duplicate Desk
Post Office Box 26200
Oklahoma City, Oklahoma 73125

You can also find this information on the FAA Internet Web page along with FAA form AC Form 8060-56 by going to <http://www.faa.gov/pilots/medical/> and highlight the link to "Request a copy of your medical certificate." The following is the telephone number to reach the duplicate certificate desk (405) 954-7674.

Your request may take several weeks.

AVNEWS

FAA ADMINISTRATOR BLAKEY TO HEAD AIA

According to Focus FAA, an internal FAA news magazine, FAA Administrator Marion C. Blakey has been named president and chief executive officer of the Aerospace Industries Association (AIA), the trade association representing the nation's aerospace manufacturers. Blakey, whose term at the FAA expires on September 13, will assume her AIA duties on November 12.

Speaking before the Aviation Safety All Managers Conference in Washington, D.C., Blakey said, "Aviation is a true passion of mine, and when I learned that I would continue to be able to work in our field, work in our industry with a tremendous group of companies that contribute on every level, I felt this was an opportunity I couldn't pass up."

Blakey noted that accepting the new post isn't a matter of forsaking the FAA, since her five-year term is about to expire. "There needs to be a new person who can commit to five years," she said. "I will say this, though: I don't think there is any question [that] this will [have been] the best job of my professional life, and I do want to thank you for that, because you all have contributed so much to making it so."

"We are very pleased to name Marion Blakey to the role of AIA President and CEO," said William H. Swanson, chairman of the AIA Board of Governors. "Her exceptional experience in the executive branch of government, as well her deep expertise in public affairs and government relations, will greatly benefit all the members of AIA as she represents the industry in the years ahead," he said

CHARTING NOTICE

Effective with the October 25, 2007, airspace cycle, the Federal Aviation Administration will reconfigure the IFR Enroute Low Altitude Chart series for the Conterminous U.S. The reconfiguration of chart coverage includes an increase in the number of charts in the series from 28 to 36. This will result in a larger scale for each chart. The change is necessary to provide space for the addition of RNAV Routes and supporting RNAV data. The benefit to the user will be improved readability, a less cluttered depiction of aeronautical information, and a more logical alignment of charts.

For additional chart reconfiguration information, including a copy of the new chart index and a chart coverage conversion table (old vs. new), please visit National Aeronautical Charting Group (NACG) Web site at: <www.naco.faa.gov> or contact the Distribution Division toll free at 1-800-638-8972 or outside the U.S. at 301-436-8301, and you will be faxed a copy of the information.

DISTRIBUTING AD AND SAIB ELECTRONICALLY

In a continuing effort to better serve our aviation customers, the FAA is now distributing Airworthiness Directives (AD) and Special Airworthiness Information Bulletins (SAIB) electronically via e-mail. Owners, operators, and all other interested persons can now sign up for this service via the FAA Regulatory and Guidance Library (RGL) Web site at <http://rgl.faa.gov/>. Subscribers just need to enter their e-mail address, pick the aircraft/engine makes and models they want to receive, and submit the information. From then on, they will receive all applicable AD and SAIB in their e-mail. When AD or SAIB are posted to the Regulatory and Guidance Library, e-mails with these documents attached are automatically transmitted within minutes to subscribers.

Eventually this method will replace the mailed-out paper copies of AD. Paper copy mail-outs are expensive and often do not reach the intended recipient. This is because hard copies are only mailed to aircraft owners (not operators in many cases), are dependent upon owners keeping their registration information updated and correct, and can be delayed by the data processing effort in updating that information.

Users can still access and print AD, along with many other aviation documents, using the FAA's Regulatory and Guidance Library. And, the official copy of any AD continues to be available in the *Federal Register* at <http://www.gpoaccess.gov/fr/index.html>.

If you have any questions or comments, call (405) 954-7071 or (405) 954-4103, or e-mail at <9-AMC-AIR140-Information-Products@faa.gov>.

FAA ADMINISTRATOR CALLS FOR RUNWAY SAFETY IMPROVEMENTS

On August 15, more than 40 aviation leaders from airlines, airports, air traffic control and pilot unions, aerospace manufacturers, and the FAA agreed to quickly implement a five point short-term plan to improve safety at U.S. airports. Recent close calls at some of our nation's busiest airports show that action must be taken to reduce the risk of runway incursions and wrong runway departures.

FAA Administrator Marion Blakey asked the meeting participants to consider solutions in four areas: cockpit procedures, airport signage and markings, air traffic procedures, and technology. Led by Bobby Sturgell, Deputy Administrator and Acting Chief Operating Officer for the Air Traffic Organization, the aviation community

agreed to a five point short-term plan:

- Within 60 days, teams of FAA, airport operators, and airlines will begin safety reviews at the airports where wrong runway departures and runway incursions are the greatest concern. The FAA is compiling the list of 20 to 30 airports based on a variety of safety risk factors, including the record of past incursions.
- Within 60 days, disseminate information and training across the entire aviation industry.
- Within 60 days, accelerate the deployment of improved airport signage and markings at the top 75 airports, well ahead of the June 2008 mandated deadline.
- Within 60 days, review cockpit procedures and air traffic control (ATC) clearance procedures. This may include changing cockpit procedures to minimize pilot activities and distractions while an aircraft is moving on the ground and to make ATC instructions more precise.
- Implement a voluntary self-reporting system for all air traffic organization safety personnel, such as air traffic controllers and technicians.

Mid- and long-term goal areas are being pursued to address maximizing situational awareness, minimizing pilot distractions, and eliminating runway incursions using procedures and technology.

Runway Incursions

A runway incursion is an incident on a runway involving an aircraft, vehicle, person, or object that creates a collision hazard or results in loss of required separation with an aircraft preparing to take off or land. So far in 2007, there have been 21 serious runway incursions (A and B events), eight of which involved commercial air carriers.

Recent Events

On July 11, a Delta Air Lines Boeing 757 on arrival at Fort Lauderdale, Florida, touched down and had to take off again to avoid colliding with a United Airlines Airbus A320 that was taxiing to a runway and had missed a turn.

On July 5, a Delta Air Lines landing at La Guardia Airport in New York narrowly missed a Delta Air Lines Connection commuter jet that had been mistakenly cleared to taxi across the runway at the same time.

On August 27, 2006, at Blue Grass Airport, Lexington, Kentucky a Comair jet crashed after taking off from a wrong runway that was too short for commercial flights, killing all but one of the 50 people onboard.

For More Information

For background information on runway safety and technologies such as Automatic Dependent Surveillance-Broadcast (ADS-B) and GPS Aircraft Positioning, go to <http://www.faa.gov/news/fact_sheets>.

EXHAUST SYSTEMS AC UPDATED

Advisory Circular (AC) 91-59A, *Inspection and Care of General Aviation Aircraft Exhaust Systems*, has been updated and is now available at <www.faa.gov>. This advisory circular emphasizes the safety hazards of poorly maintained aircraft exhaust systems (reciprocating powerplants). It highlights areas in the exhaust system where failures occur and provides information on the kinds of problems to be expected. It also emphasizes the safety hazards and potential dangers of inadequate and infrequent inspections and a lack of routine preventive maintenance on exhaust system components between interval inspections.

FLIGHT SERVICE STATION FEEDBACK LINE

The FAA has established a toll-free telephone number for pilots to comment on services they receive from Lockheed Martin flight service facilities. Customer feedback from this line will be used by the FAA's Air Traffic Organization to make sure flight service stations operated by Lockheed Martin meet agency standards. The information will be used by the agency to better monitor and manage Lockheed Martin's performance levels.

The number is 1-888-FLT SRVC or 1-888-358-7782. Pilots will be asked by an automated system to provide their name, date, time, and location of the service involved, along with their aircraft identification number and a brief description of what occurred. The system can accept up to 80 calls simultaneously, minimizing the likelihood of a busy signal. Messages may be up to three minutes long.

Pilot comments will be collected and recorded by the FAA's Flight Service Operations and Safety Group. They will then be forwarded to Lockheed Martin. The company must respond to pilots within 15 days, notifying the FAA when they have done so. A database of comments and actions taken to address pilot concerns will be maintained by the Flight Service Operations and Safety Group. This information will be forwarded to the Aircraft Owners and Pilots Association, which has expressed interest in receiving it.

In addition to the new toll-free comment line, pilots can also provide feedback online. The online service can be accessed from the FAA Home page through the "Pilots" link on the right side of the page <http://www.faa.gov/pilots/>, and clicking the email link under the Flight Service Stations heading: <9-AWA-ATO-SYSOPS-FS@faa.gov>.

Editor's Runway

from the pen of H. Dean Chamberlain

Saying Goodbye

Saying goodbye to a fellow employee you have worked with for years is always hard. But in the case of one employee retiring at the end of September, it is more difficult. Mario Toscano's name has been listed on the inside cover of this magazine for 14 years. Although his name has been listed with different articles over those years, especially his annual articles on the Albuquerque International Balloon Fiesta® in our September-October issues for the past six years, Mario's primary contribution to the magazine has been his layout and design of each issue since his arrival on staff in 1993. His name may not have been listed as the writer of a particular article, but Mario's imprint is on every article published in the magazine during his time on staff. A writer may write an interesting article. The writer may even provide photographs and illustrations to support those words. Making those words and supporting artwork exciting to look at and read has been Mario's responsibility for more than 80 issues. His task was simple. Take the elements provided, add some magic, and come up with a magazine layout that those involved in aviation and aviation safety would want to read and learn from.

An editor may set the tone of a publication and get to change a word here and there, but it is the designer's palette of ideas, creativity, and knowledge of what gets readers' attention and in today's electronic world, computer graphic skills that attracts readers to the publication. Readers must want to open and read a publication, whether in print or on the Internet. In the case of the *FAA Aviation News* magazine, Mario has been responsible for the magazine's design and layout, as well as being the magazine's Internet Web master.

His choice of photographs, type styles, headlines, and layouts during his years on staff have contributed significantly to the success of the magazine. His dedication to the magazine, its staff members, and his fellow employees in the magazine's parent organization, the Flight Standards Service's General Aviation and Commercial Division, has served as an inspiration to both the magazine's staff as well as his fellow employees.

The *FAA Aviation News* and its staff wishes happiness, fair winds and following seas to its own graphic designer, recognized painter of fine art, and retired U.S. Coast Guard Senior Chief Mario Toscano, his wife Frances, their two children, and (almost) three grandchildren. Thanks Mario for a job well done.

U.S. Department
of Transportation

**Federal Aviation
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DO NOT DELAY -- CRITICAL TO FLIGHT SAFETY!